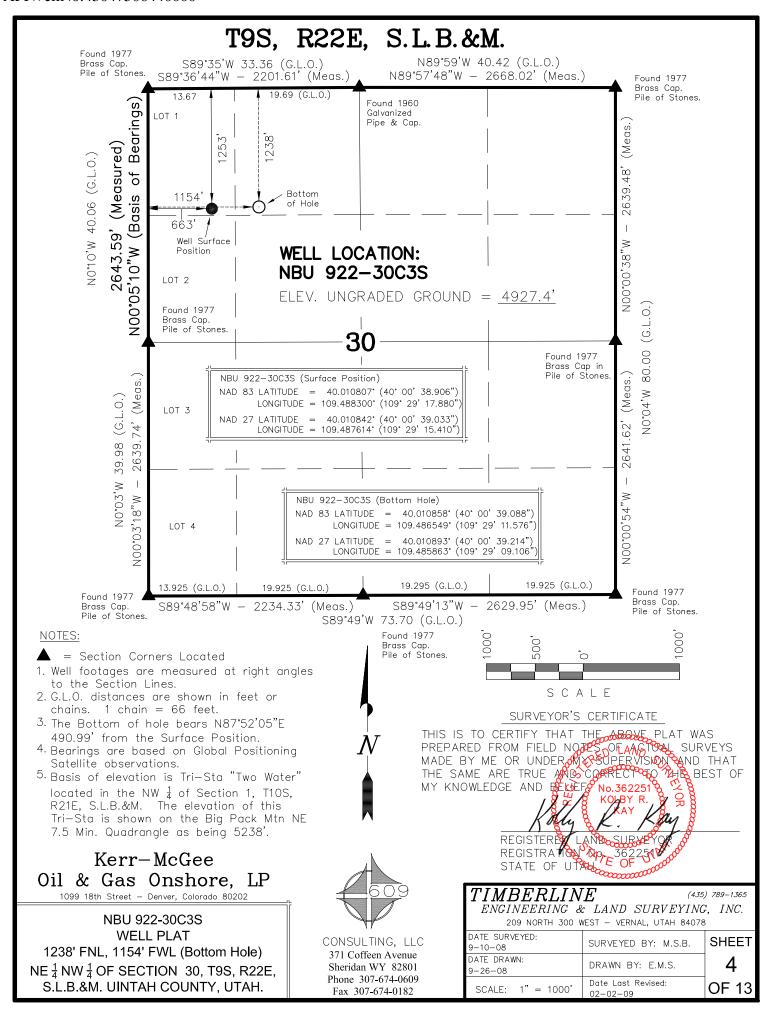
		DEPARTMENT	TATE OF UTAH OF NATURAL RES OF OIL, GAS AND N			FORI		
APPLI	CATION FOR	PERMIT TO DRILL	L		1. WELL NAME and	NUMBER NBU 922-30C3S		
2. TYPE OF WORK  DRILL NEW WELL (	REENTER P8	A WELL ( DEEPE	EN WELL ( )		3. FIELD OR WILDO	AT NATURAL BUTTES		
4. TYPE OF WELL Gas We		ed Methane Well: NO			5. UNIT or COMMUN	NITIZATION AGRE	EMENT NAME	
6. NAME OF OPERATOR		GAS ONSHORE, L.P.			7. OPERATOR PHON			
8. ADDRESS OF OPERATOR					9. OPERATOR E-MA	IL		
10. MINERAL LEASE NUMBER	. BOX 173779, D	enver, CO, 80217	ERSHIP		12. SURFACE OWNE	ondragon@anadarko ERSHIP	COIII	
(FEDERAL, INDIAN, OR STATE) UTU 0463		FEDERAL ( INC	DIAN 🗍 STATE 🤅	) FEE (	FEDERAL ( INC	DIAN 🗍 STATE (	FEE (III)	
13. NAME OF SURFACE OWNER (if box 12	= 'fee')	1			14. SURFACE OWNE	R PHONE (if box 1	2 = 'fee')	
15. ADDRESS OF SURFACE OWNER (if box	12 = 'fee')				16. SURFACE OWNE	R E-MAIL (if box 1	.2 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME		18. INTEND TO COM		ION FROM	19. SLANT			
(if box 12 = 'INDIAN')		YES (Submit C	Commingling Applicati	on) NO	VERTICAL DIR	ECTIONAL 📵 HO	ORIZONTAL (	
20. LOCATION OF WELL	FO	OTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	1253 F	NL 663 FWL	NWNW	30	9.0 S	22.0 E	S	
Top of Uppermost Producing Zone	1238 FN	NL 1154 FWL	1154 FWL NENW		9.0 S 22.0 E		S	
At Total Depth	1238 FN	NL 1154 FWL	NENW	30	9.0 S	22.0 E	S	
21. COUNTY UINTAH		22. DISTANCE TO N	EAREST LEASE LIN 1154	LINE (Feet) 23. NUMBER OF ACRES IN DRILLING UNIT 551			JNIT	
		25. DISTANCE TO N (Applied For Drilling						
<b>27. ELEVATION - GROUND LEVEL</b> 4927		28. BOND NUMBER			29. SOURCE OF DRI WATER RIGHTS AP		F APPLICABLE	
		A	TTACHMENTS					
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORCAN	CE WITH THE UT	AH OIL AND G	AS CONSERVATION	ON GENERAL RU	LES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUR	VEYOR OR ENGINEE	R	PLETE DRILLING	i PLAN			
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EMENT (IF FEE SURF	FACE) FORM	1 5. IF OPERATO	R IS OTHER THAN TH	IE LEASE OWNER		
✓ DIRECTIONAL SURVEY PLAN (IF DID DRILLED)	RECTIONALLY	OR HORIZONTALLY	<b>№</b> торо	GRAPHICAL MAI	P			
NAME Danielle Piernot	TI	I <b>TLE</b> Regulatory Analys	t	PHONE 720	929-6156			
SIGNATURE	D	ATE 09/01/2009		EMAIL dani	elle.piernot@anadarko	.com		
api number assigned 43047506440000	Al	PPROVAL Permit Man	ager	(Y() <u>.</u>				

API Well No: 43047506440000

	Proposed Hole, Casing, and Cement											
String	Hole Size	<b>Casing Size</b>	Top (MD)	Bottom (MD)								
Prod	7.875	4.5	0	9633								
Pipe	Grade	Length	Weight									
	Grade I-80 Buttress	9633	11.6									

API Well No: 43047506440000

	Proposed Hole, Casing, and Cement											
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)								
Surf	12.25	9.625	0	2460								
Pipe	Grade	Length	Weight									
	Grade J-55 LT&C	2460	36.0			Г						
						Г						

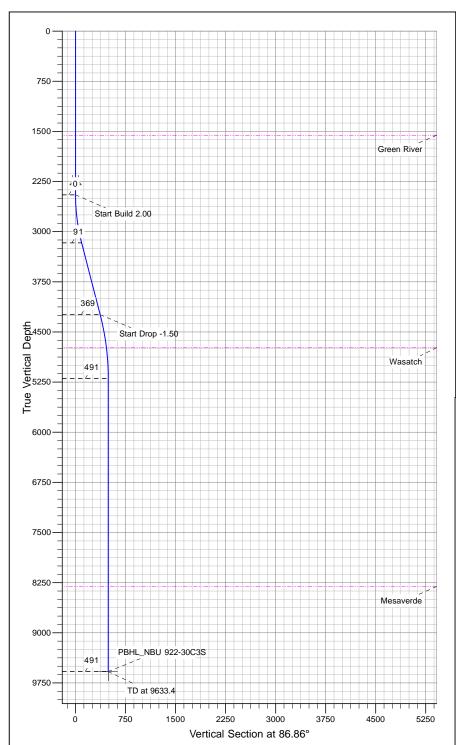


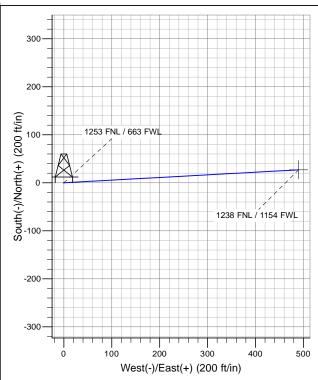


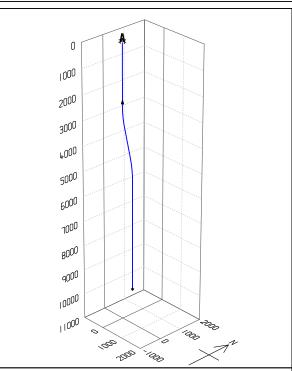
Well Name: P\_NBU 922-30C3S
Surface Location: UINTAH\_NBU 922-30D PAD
NAD 1927 (NADCON CONUS)⊅niversal Transverse Mercator (US Survey Feet)

UTAH - UTM (feet), NAD27, Zone 12N Ground Elevation: 4927.0

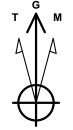
Northing Easting Latitude Longitude 4429845.98 629082.42 40° 0' 39.03120 N 109° 29' 15.41040 W







l	SECTION DETAILS									
I	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
I	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
ı	2450.0	0.00	0.00	2450.0	0.0	0.0	0.00	0.00	0.0	
I	3175.0	14.50	86.86	3167.3	5.0	91.1	2.00	86.86	91.3	
ı	4284.7	14.50	86.86	4241.6	20.2	368.5	0.00	0.00	369.1	
ı	5251.3	0.00	0.00	5198.0	26.9	490.0	1.50	180.00	490.8	
l	9633.4	0.00	0.00	9580.0	26.9	490.0	0.00	0.00	490.8	
ı										



Azimuths to Grid North True North: -0.97° Magnetic North: 10.36°

Magnetic Field Strength: 52580.3snT Dip Angle: 65.94° Date: 4/16/2009 Model: IGRF200510

# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_NBU 922-30D PAD P\_NBU 922-30C3S

P\_NBU 922-30C3S

Plan: Plan #1 04-16-09 ZJRA6

# **Standard Planning Report - Geographic**

05 August, 2009

### **APC**

### Planning Report - Geographic

Database: edm5000p

Company: US ROCKIES REGION PLANNING Project: UTAH - UTM (feet), NAD27, Zone 12N

Site: UINTAH\_NBU 922-30D PAD

Well: P\_NBU 922-30C3S Wellbore: P NBU 922-30C3S Plan #1 04-16-09 ZJRA6 Design:

**Local Co-ordinate Reference:** 

TVD Reference: **MD Reference:** North Reference:

**Survey Calculation Method:** 

Well P\_NBU 922-30C3S

WELL @ 4927.0ft (Original Well Elev) WELL @ 4927.0ft (Original Well Elev)

Grid

Minimum Curvature

**Project** UTAH - UTM (feet), NAD27, Zone 12N

Universal Transverse Mercator (US Survey Fee System Datum: Map System: Mean Sea Level

NAD 1927 (NADCON CONUS) Geo Datum: Map Zone: Zone 12N (114 W to 108 W)

Site UINTAH\_NBU 922-30D PAD

4,429,853.80 m Site Position: Northing: Latitude: 40° 0' 39.29760 N Easting: 629,059.32 m 109° 29' 16.37880 W From: Lat/Long Longitude: **Slot Radius: Grid Convergence: Position Uncertainty:** 0.0 ft 0.000 in 0.97°

Well P\_NBU 922-30C3S

**Well Position** +N/-S 0.0 ft Northing: 4,429,845.98 m Latitude: 40° 0' 39.03120 N +E/-W 0.0 ft Easting: 629,082.42 m Longitude: 109° 29' 15.41040 W 0.0 ft **Position Uncertainty** Wellhead Elevation: **Ground Level:** 4,927.0 ft

P\_NBU 922-30C3S Wellbore

Declination Dip Angle Field Strength **Magnetics Model Name** Sample Date (°) (°) (nT) IGRF200510 4/16/2009 11.33 65.94 52,580

Plan #1 04-16-09 ZJRA6 Design

**Audit Notes:** 

Version: **PLAN** 0.0 Phase: Tie On Depth:

**Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.0 0.0 0.0 86.86

Plan Section	s									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,450.0	0.00	0.00	2,450.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,175.0	14.50	86.86	3,167.3	5.0	91.1	2.00	2.00	0.00	86.86	
4,284.7	14.50	86.86	4,241.6	20.2	368.5	0.00	0.00	0.00	0.00	
5,251.3	0.00	0.00	5,198.0	26.9	490.0	1.50	-1.50	0.00	180.00	
9,633.4	0.00	0.00	9,580.0	26.9	490.0	0.00	0.00	0.00	0.00 F	PBHL_NBU 922-30

### **APC**

### Planning Report - Geographic

Database: Company: Project:

Site:

edm5000p

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N

UINTAH\_NBU 922-30D PAD

 Well:
 P\_NBU 922-30C3S

 Wellbore:
 P\_NBU 922-30C3S

 Design:
 Plan #1 04-16-09 ZJRA6

**Local Co-ordinate Reference:** 

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well P\_NBU 922-30C3S

WELL @ 4927.0ft (Original Well Elev) WELL @ 4927.0ft (Original Well Elev)

Grid

Minimum Curvature

Planned Surv	<b>r</b> ey								
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (m)	Map Easting (m)	Latitude	Longitude
0.0 1,557.0		0.00 0.00	0.0 1,557.0	0.0 0.0	0.0 0.0	4,429,845.98 4,429,845.98	629,082.42 629,082.42	40° 0' 39.03120 N 40° 0' 39.03120 N	109° 29' 15.41040 W 109° 29' 15.41040 W
<b>Green</b> 2,300.0		0.00	2,300.0	0.0	0.0	4,429,845.98	629,082.42	40° 0' 39.03120 N	109° 29' 15.41040 W
	e Casing		,				,		
2,450.0 3,175.0 4,284.7 4,786.2	14.50 14.50	0.00 86.86 86.86 86.86	2,450.0 3,167.3 4,241.6 4,734.0	0.0 5.0 20.2 25.3	0.0 91.1 368.5 461.8	4,429,845.98 4,429,847.50 4,429,852.14 4,429,853.70	629,082.42 629,110.19 629,194.75 629,223.17	40° 0' 39.03120 N 40° 0' 39.06535 N 40° 0' 39.16929 N 40° 0' 39.20422 N	
Wasato									
5,251.3 8,360.4		0.00 0.00	5,198.0 8,307.0	26.9 26.9	490.0 490.0	4,429,854.18 4,429,854.18	629,231.78 629,231.78	40° 0' 39.21480 N 40° 0' 39.21480 N	109° 29' 9.10680 W 109° 29' 9.10680 W
Mesave									
9,633.4	0.00	0.00	9,580.0	26.9	490.0	4,429,854.18	629,231.78	40° 0' 39.21480 N	109° 29' 9.10680 W

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (m)	Easting (m)	Latitude	Longitude
PBHL_NBU 922-30C - plan hits target of - Point		359.03	9,580.0	26.9	490.0	4,429,854.18	629,231.78	40° 0' 39.21480 N	I 109° 29' 9.10680 W

Casing Points							
N	leasured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (in)	Hole Diameter (in)	
	2,300.0	2,300.0	Surface Casing		9.625	12.250	

Formations							
	Measured Depth (ft)	Vertical Depth (ft)	Nan	ne	Lithology	Dip (°)	Dip Direction (°)
	1,557.0 4,786.2 8,360.4	4,734.0	Green River Wasatch Mesaverde			0.00 0.00 0.00	

### NBU 922-30C3S

Pad: NBU 922-30D Surface: 1,253' FNL 663' FWL (NW/4NW/4) Lot 1 BHL: 1,238' FNL 1,154' FWL (NE/4NW/4) Sec. 30 T9S R22E

> Uintah, Utah Mineral Lease: UTU 0463

### ONSHORE ORDER NO. 1

### DRILLING PROGRAM

# 1. – 2. Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	Resource
Uinta	0 – Surface	
Green River	1,557'	
Birds Nest	1,776'	Water
Mahogany	2,258'	Water
Wasatch	4,734'	Gas
Mesaverde	7,360'	Gas
MVU2	8,307'	Gas
MVL1	8,894'	Gas
TVD	9,580'	
TD	9,633'	

### 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

### 4. Proposed Casing & Cementing Program:

Please refer to the attached Drilling Program.

### 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program.

### **Evaluation Program:**

Please refer to the attached Drilling Program.

### 7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 9,580' TVD, approximately equals 5,869 psi (calculated at 0.61 psi/foot).

Maximum anticipated surface pressure equals approximately 3,761 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

### 8. Anticipated Starting Dates:

*Drilling is planned to commence immediately upon approval of this application.* 

### 9. <u>Variances:</u>

Please refer to the attached Drilling Program.

*Onshore Order #2 – Air Drilling Variance* 

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

### Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). The air rig operation utilizes a 5M BOPE when drilling. This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

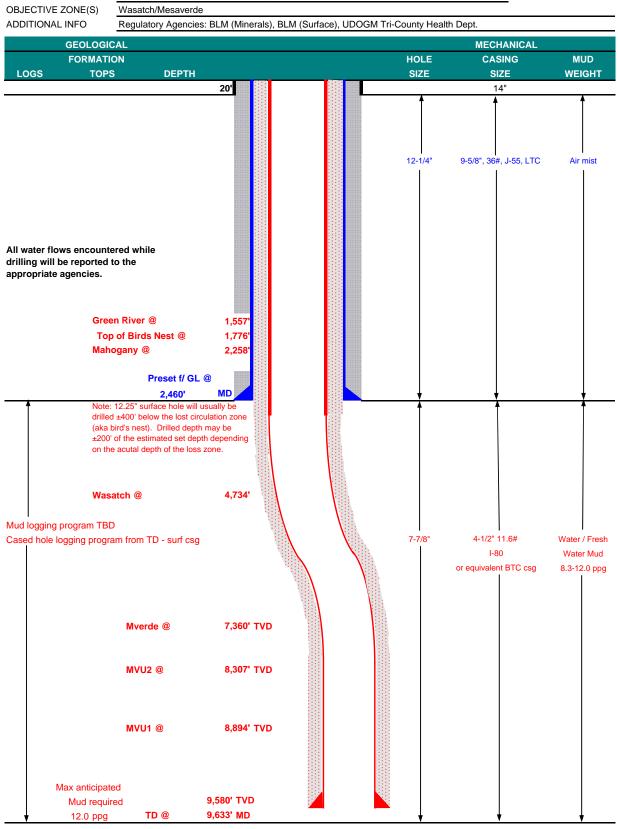
### 10. Other Information:

Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP <u>DRILLING PROGRAM</u>

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE August 17, 2009 NBU 922-30C3S WELL NAME 9,580' TVD 9,633' MD Natural Buttes FINISHED ELEVATION 4,927' FIELD **COUNTY** Uintah STATE Utah SURFACE LOCATION NW/4 NW/4 1,253' FNL 663' FWL Sec 30 T 9S R 22E Lot 1 Latitude: 40.010807 Longitude: -109.488300 NAD 83 BTM HOLE LOCATION NE/4 NW/4 1,238' FNL 1,154' FWL Sec 30 T 9S R 22E Latitude: 40.010858 -109.486549 NAD 83 Longitude: Wasatch/Mesaverde





### **KERR-McGEE OIL & GAS ONSHORE LP**

### **DRILLING PROGRAM**

### CASING PROGRAM

									DESIGN FACT	ORS
	SIZE	INTI	ERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	C	)-40'							
								3,520	2,020	453,000
SURFACE	9-5/8"	0	to	2,460	36.00	J-55	LTC	0.90	1.75	6.51
								7,780	6,350	278,000
PRODUCTION	4-1/2"	0	to	9,633	11.60	I-80	BTC	2.01	1.06	2.85

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.0 ppg) 0.22 psi/ft = gradient for partially evac wellbore (Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 3,761 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.0 ppg) 0.61 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 5,869 psi

### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, optio	n 2 will be ເ	ıtilized	
Option 2 LEAD	1,960'	65/35 Poz + 6% Gel + 10 pps gilsonite	460	35%	12.60	1.81
		+ 0.25 pps Flocele + 3% salt BWOW				
TAIL	500'	Premium cmt + 2% CaCl	180	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,233'	Premium Lite II + 3% KCI + 0.25 pps	400	40%	11.00	3.38
		celloflake + 5 pps gilsonite + 10% gel				
		+ 0.5% extender				
TAIL	5,400'	50/50 Poz/G + 10% salt + 2% gel	1,320	40%	14.30	1.31
		+ 0.1% R-3				

 $<sup>{}^{\</sup>star}$ Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

### **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

### **ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

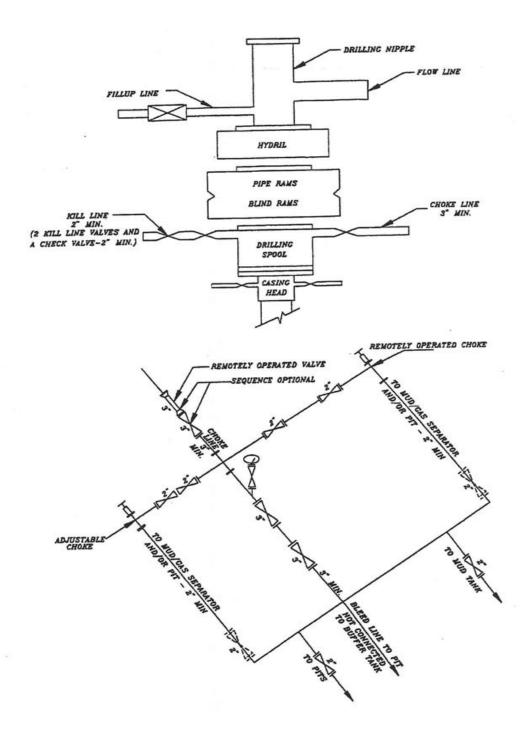
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.	
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.	

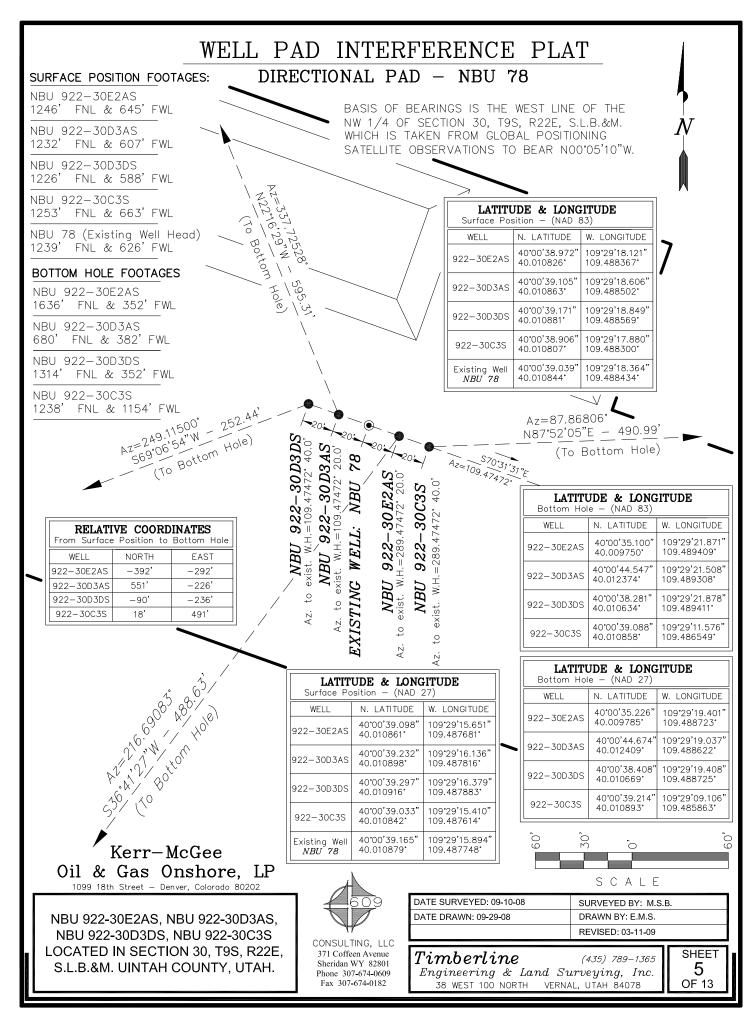
	Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.						
DRILLING	ENGINEER:		DATE:				
		John Huycke / Emile Goodwin					
DRILLING	SUPERINTENDENT:		DATE:				
		John Merkel / Lovel Young					

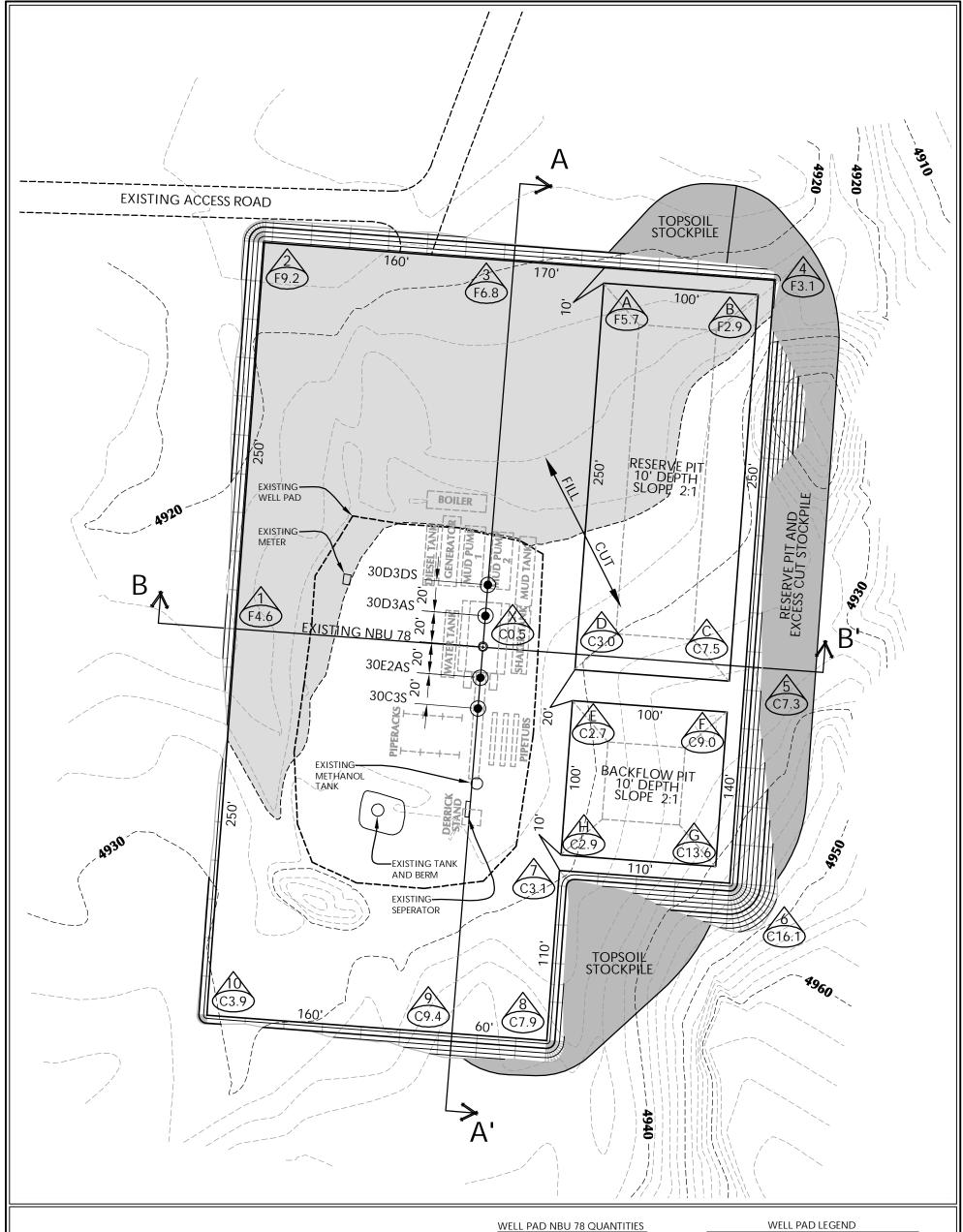
<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 922-30C3S



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK





### KERR-MCGEE OIL & GAS ONSHORE L.P.

1099 18th Street - Denver, Colorado 80202

WELL PAD - LOCATION LAYOUT NBU 922-30E2AS, NBU 922-30D3AS, NBU 922-30D3DS, NBU 922-30C3S LOCATED IN SECTION 30, T.9S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH



### CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

TOTAL CUT FOR WELL PAD = 11,086 C.Y. TOTAL FILL FOR WELL PAD = 10,440 C.Y. TOPSOIL @ 6" DEPTH = 2,576 C.Y. EXCESS MATERIAL = 646 C.Y.
TOTAL DISTURBANCE = 3.94 ACRES SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 25,880 BARRELS +/- 25,860 BARKELS
RESERVE PIT VOLUME
+/- 7,185 CY
BACKFLOW PIT CAPACITY (2' OF FREEBOARD)
+/- 8,780 BARKELS
BACKFLOW PIT VOLUME

EXISTING GRADE @ CENTER OF PAD = 4,927.1' FINISHED GRADE ELEVATION = 4,926.6'

+/- 2,520 CY

CUT SLOPES = 1.5:1 FILL SLOPES = 1.5:1

• ]	Scale:	1"=60' Date:	11/12/08	SHEET NO:	
7	REVISED:		GMH 3/19/09	6	6 OF 13

### WELL PAD LEGEND

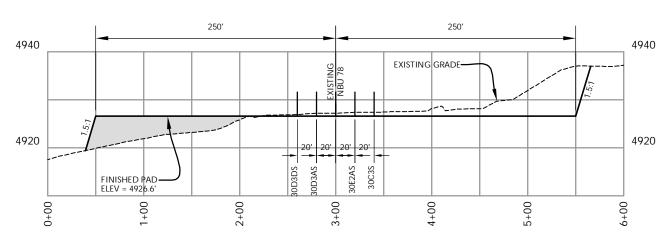


EXISTING WELL LOCATION PROPOSED WELL LOCATION EXISTING CONTOURS (2' INTERVAL) PROPOSED CONTOURS (2' INTERVAL)

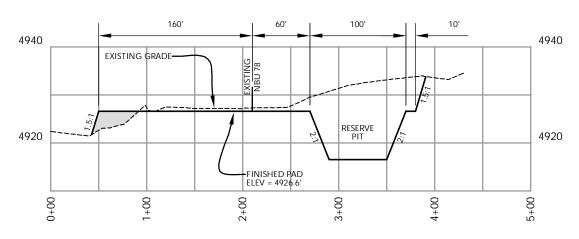


HORIZONTAL 0 2' CONTOURS

Timberline(435) 789-1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078



### **CROSS SECTION A-A'**



### **CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS
MAXIMUM RESERVE PIT DEPTH.

# KERR-MCGEE OIL & GAS ONSHORE L.P.

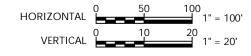
1099 18th Street - Denver, Colorado 80202

WELL PAD - CROSS SECTIONS NBU 922-30E2AS, NBU 922-30D3AS, NBU 922-30D3DS, NBU 922-30C3S LOCATED IN SECTION 30, T.9S., R.22E. S.L.B.&M., UINTAH COUNTY, UTAH

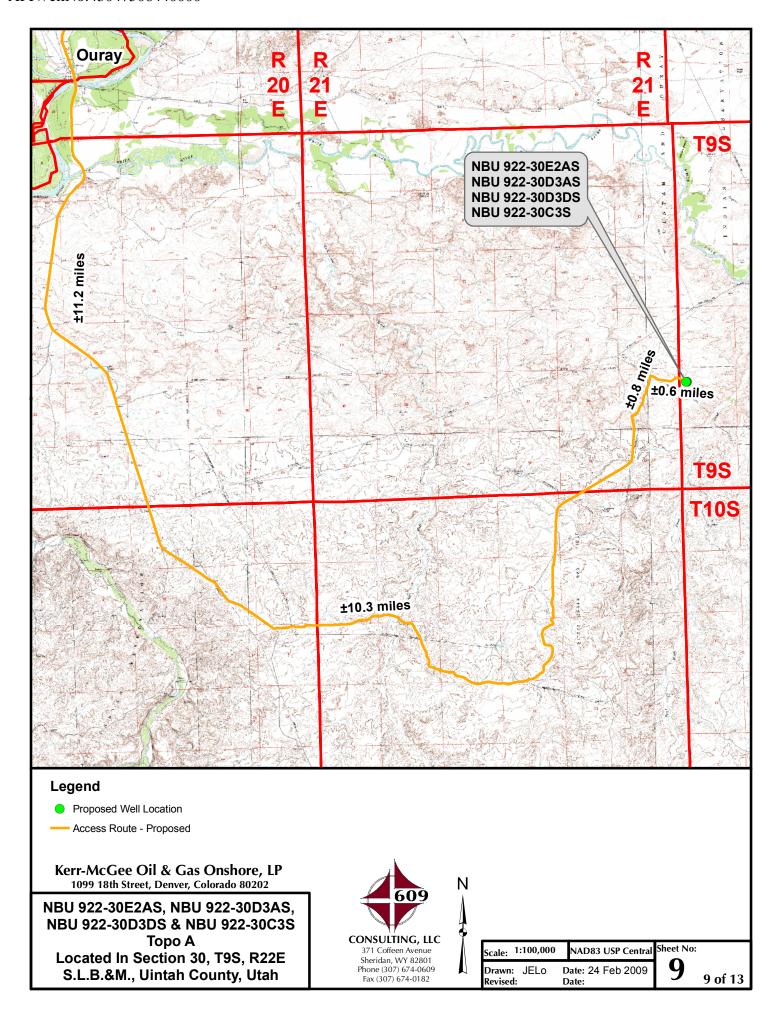


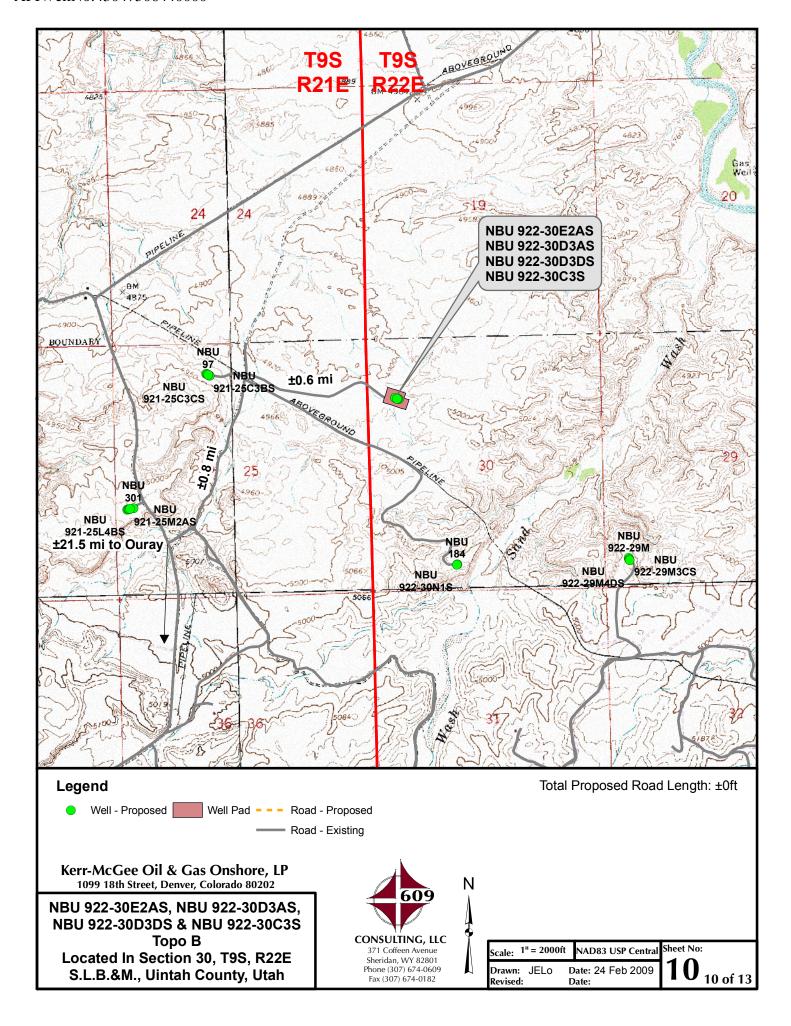
CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

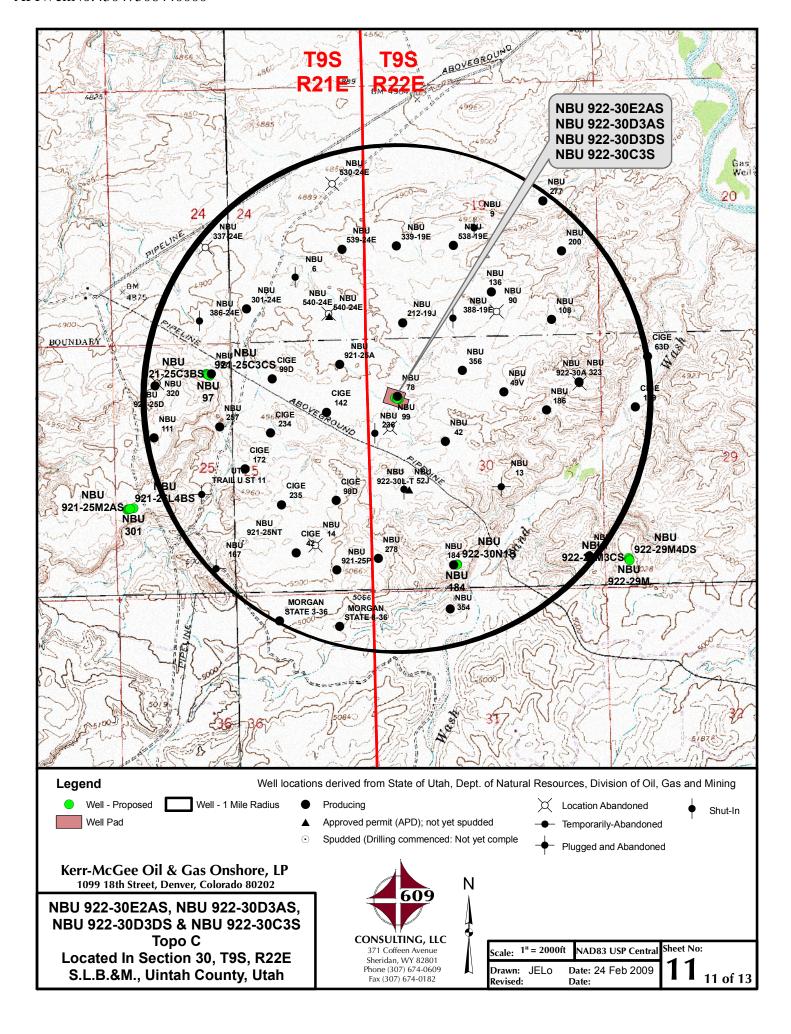
j	Scale:	1"=100'	Date:	11/12/08	SHEET NO:	
	REVISED:			GMH 3/19/09	7	7 OF 13



**Timberline** (435) 789–1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078







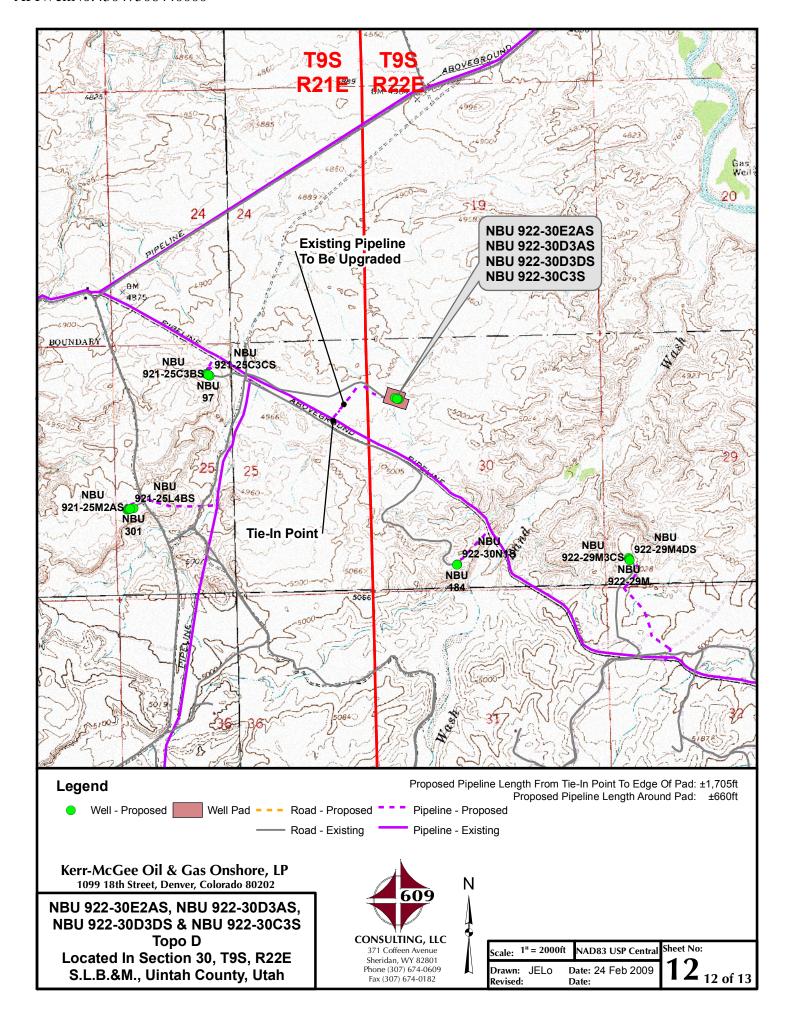




PHOTO VIEW: FROM CORNER D TO LOCATION STAKE

CAMERA ANGLE: SOUTHWESTERLY

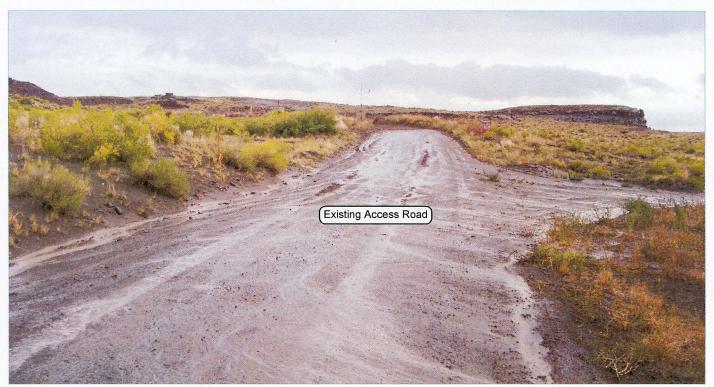


PHOTO VIEW: FROM EXISTING ROAD

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street — Denver, Colorado 80202

NBU 922-30E2AS, NBU 922-30D3AS, NBU 922-30D3DS, NBU 922-30C3S LOCATED IN SECTION 30, T9S, R22E, S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

CAMERA ANGLE: NORTHEASTERLY

### LOCATION PHOTOS

DATE TAKEN: 09-10-08 DATE DRAWN: 09-29-08

TAKEN BY: M.S.B.

DRAWN BY: E.M.S.

REVISED: 03-11-09

Timberline

(435) 789-1365 Engineering & Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078

SHEET 8 OF 13

### Kerr-McGee Oil & Gas Onshore, LP NBU 922-30E2AS, NBU 922-30D3AS, NBU 922-30D3DS & NBU 922-30C3S Section 30, T9S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 11.2 MILES TO THE INTERSECTION OF THE GLEN BENCH ROAD (COUNTY B ROAD 3260). EXIT LEFT AND PROCEED IN AN EASTERLY, THEN SOUTHEASTERLY, THEN NORTHEASTERLY DIRECTION ALONG THE GLEN BENCH ROAD APPROXIMATELY 10.3 MILES TO THE INTERSECTION OF A CLASS D COUNTY ROAD RUNNING IN A NORTH BY NORTHEAST DIRECTION. EXIT RIGHT AND PROCEED IN A NORTH BY NORTHEAST DIRECTION ALONG THE CLASS D ROAD APPROXIMATELY 0.8 MILES TO AN EXISTING SERVICE ROAD TO THE EAST. EXIT RIGHT AND PROCEED IN AN EASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 0.6 MILES TO THE EXISTING WELL PAD.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 53.6 MILES IN A SOUTHERLY DIRECTION.

### NBU 922-30C3S

Surface: 1,253' FNL 663' FWL (NW/4NW/4) Lot 1 BHL: 1,238' FNL 1,154' FWL (NE/4NW/4)

### **NBU 922-30D3AS**

Surface: 1,232' FNL 607' FWL (NW/4NW/4) Lot 1 BHL: 680' FNL 382' FWL (NW/4NW/4) Lot 1

### **NBU 922-30D3DS**

Surface: 1,226' FNL 588' FWL (NW/4NW/4) Lot 1 BHL: 1,314' FNL 352' FWL (NW/4NW/4) Lot 1

### **NBU 922-30E2AS**

Surface: 1,246' FNL 645' FWL (NW/4NW/4) Lot 1 BHL: 1,636' FNL 352' FWL (SW/4NW/4) Lot 2

Pad: NBU 922-30D Sec. 30 T9S R22E

Uintah, Utah Mineral Lease: UTU 0463

### ONSHORE ORDER NO. 1

### MULTI-POINT SURFACE USE & OPERATIONS PLAN SUBMITTED WITH SITE-SPECIFIC INFORMATION

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. An NOS was submitted on March 17, 2009 showing the surface locations in NW/4 NW/4 of Section 30 T9S R22E. At the time the NOS was submitted for the NBU 922-30E2AS, it was known as the NBU 922-30D2S.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BLM-Vernal Field Office.

An on-site meeting was held on February 5, 2009. Present were:

- Verlyn Pindell, Dave Gordon and Scott Ackerman BLM;
- Kolby Kay 609 Consulting, LLC
- Tony Kazeck, Clay Einerson, Raleen White, Ramey Hoopes, Grizz Oleen, Charles Chase and Spencer Biddle Kerr-McGee.

### **Directional Drilling:**

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, this well will be directionally drilled in order to access portions of our lease which are otherwise inaccessible due to topography.

### 1. <u>Existing Roads</u>:

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

### 2. Planned Access Roads:

See MDP for additional details on road construction.

No new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.

### 3. <u>Location of Existing Wells Within a 1-Mile Radius:</u>

Please refer to Topo Map C.

### 4. <u>Location of Existing and Proposed Facilities</u>:

See MDP for additional details on Existing and Proposed Facilities.

This pad will expand the existing pad for the NBU 78, which is a producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records.

The following guidelines will apply if the well is productive.

Approximately  $\pm 2,365$ ' ( $\pm 0.45$  miles) of pipeline is proposed. The existing pipeline, as shown on Topo D, will be upgraded to accommodate anticipated production from the proposed wells. The upgraded pipeline will follow the same route as the existing pipeline. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place.

Per request from the onsite meeting, a water diversion ditch will be installed around the pad.

### 5. Location and Type of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

### **6.** Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

### 7. Methods of Handling Waste Materials:

See MDP for additional details on Methods of Handling Waste Materials.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

### 8. Ancillary Facilities:

See MDP for additional details on Ancillary Facilities.

None are anticipated.

### **9.** Well Site Layout: (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

### 10. Plans for Reclamation of the Surface:

See MDP for additional details on Plans for Reclamation of the Surface.

### 11. <u>Surface/Mineral Ownership</u>:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

### NBU 922-30C3S / 30D3AS/ 30D3DS / 30E2ASSurface Use Plan of Operations

Page 4

### 12. Other Information:

See MDP for additional details on Other Information.

# 'APIWeIINo:43047506440000

### 13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6007 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Taky Scholl Duk	August 13, 2009
Kathy Schneebeck Dulnoan	Date



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779

August 5, 2009

Diana Mason Utah Department of Oil, Gas & Mining P.O. Box 145801 Salt Lake City, Utah 54114-6100

RE: Directional Drilling Letter R649-3-11

NBU 922-30C3S

**T9S-R22E** 

Section 30: NW/4NW/4 surface, NE/4NW/4 bottom hole

1253' FNL, 663' FWL (surface)

1238' FNL, 1154' FWL (bottom hole)

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are herby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 922-30C3S is located within the Natural Buttes Unit Area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit to be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Senior Staff Landman

CLASS I REVIEW OF
KERR-MCGEE OIL & GAS ONSHORE LP'S
PROPOSED NBU 922-30C3S, 922-30D3AS,
922-30D3DS, AND 922-30E2AS DRILL LOCATIONS
TOWNSHIP 9S, RANGE 22E, SECTION 30
UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Bureau of Land Management
Vernal Field Office
and
State of Utah
School & Institutional Trust Lands Administration

Prepared Under Contract With:

Kerr-McGee Oil and Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 08-280b

August 14, 2009

United States Department of Interior (FLPMA)
Permit No. 09-UT-60122

Public Lands Policy Coordination Office Archaeological Survey Permit No. 117

## **Paleontological Reconnaissance Survey Report**

Survey of Kerr McGee's Proposed Directional Wells and Pipeline for "NBU #922-30E2AS, 30D3AS, 30D3DS & 30C3S" (Sec. 25, T 9 S, R 21 E) & (Sec. 30, T 9 S, R 22 E)

Red Wash SW Topographic Quadrangle Uintah County, Utah

December 1, 2008

Prepared by Stephen D. Sandau Paleontologist for Intermountain Paleo-Consulting P. O. Box 1125 Vernal, Utah 84078



# **Grasslands Consulting, Inc.**

4800 Happy Canyon Road, Suite 110, Denver, CO 80237 (303) 759-5377 Office (303) 759-5324 Fax

SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

Report Number: GCI #86

**Operator:** Kerr-McGee Oil & Gas Onshore LP

Wells: NBU 922-30D pad (Bores: NBU 922-30E2AS, NBU 922-30C3S, NBU 922-30D3AS,

NBU 922-30D3DS)

**Pipeline:** Associated pipeline to proposed well pad

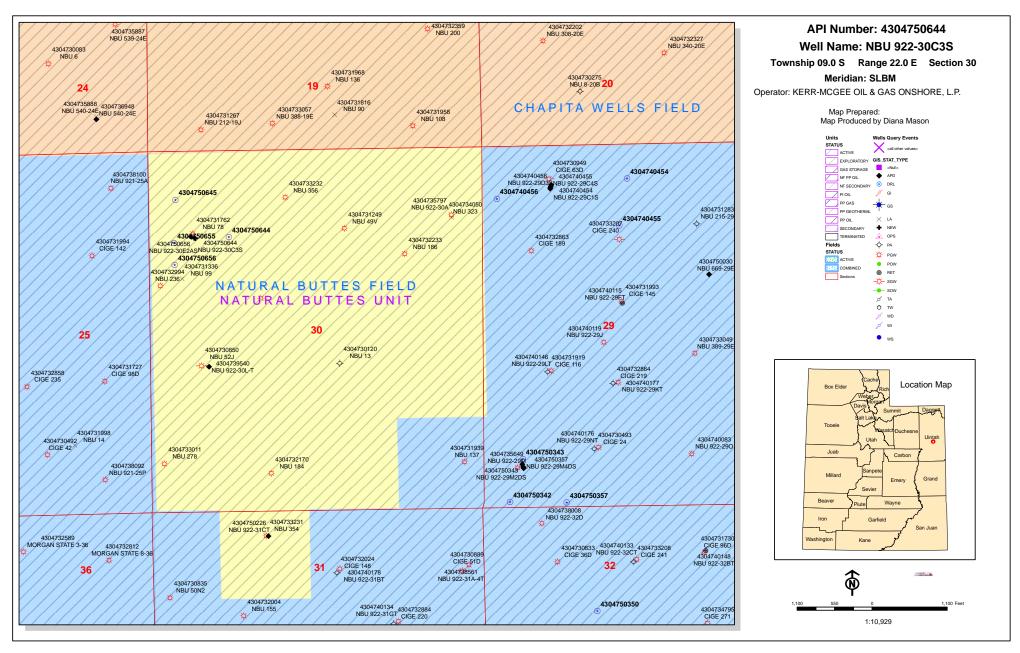
Location: Section 30, Township 9 South, Range 22 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*)

**Date:** August 6, 2009

**Observer(s):** Grasslands Consulting, Inc. Biologist: Nick Hall. Technician: Chad Johnson.

**Weather:** Partly cloudy, 70-90°F, 0-10 mph winds with slight precipitation.



# **United States Department of the Interior**

# BUREAU OF LAND MANAGEMENT Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

August 28, 2009

### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah

County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME		LOCATION							
(Proposed PZ WASATCH-MESA VERDE)										
43-047-50640	NBU	1022-8B1DS BHL				R22E R22E				
43-047-50641	NBU	1022-8B4AS BHL				R22E R22E				
43-047-50642	NBU	1022-8C1AS BHL				R22E R22E				
43-047-50643	NBU	1022-8C1CS BHL				R22E R22E				
43-047-50644	NBU	922-30C3S BHL				R22E R22E				
43-047-50645	NBU	922-30D3AS BHL				R22E R22E				
43-047-50646	NBU	921-30C3CS BHL				R21E R21E				
43-047-50647	NBU	921-30D2DS BHL				R21E R21E				

Page 2

### API # WELL NAME

### LOCATION

(Proposed PZ WASATCH-MESA VERDE)

- 43-047-50648 NBU 921-30D3DS Sec 30 T09S R21E 0759 FNL 0887 FWL BHL Sec 30 T09S R21E 1152 FNL 0665 FWL
- 43-047-50649 NBU 921-30E2AS Sec 30 T09S R21E 0771 FNL 0903 FWL BHL Sec 30 T09S R21E 1522 FNL 0665 FWL
- 43-047-50650 NBU 1022-7N1S Sec 07 T10S R22E 0089 FSL 1920 FEL BHL Sec 07 T10S R22E 0895 FSL 1870 FWL
- 43-047-50651 NBU 1022-7N4S Sec 07 T10S R22E 0097 FSL 1938 FEL BHL Sec 07 T10S R22E 0595 FSL 1740 FWL
- 43-047-50652 NBU 1022-704AS Sec 07 T10S R22E 0081 FSL 1902 FEL BHL Sec 07 T10S R22E 0550 FSL 1560 FEL
- 43-047-50653 NBU 1022-704DS Sec 07 T10S R22E 0074 FSL 1883 FEL BHL Sec 07 T10S R22E 0230 FSL 1650 FEL
- 43-047-50655 NBU 922-30D3DS Sec 30 T09S R22E 1226 FNL 0588 FWL BHL Sec 30 T09S R22E 1314 FNL 0352 FWL
- 43-047-50656 NBU 922-30E2AS Sec 30 T09S R22E 1246 FNL 0645 FWL BHL Sec 30 T09S R22E 1636 FNL 0352 FWL
- 43-047-50678 NBU 922-31G4BS Sec 31 T09S R22E 2317 FSL 0188 FEL BHL Sec 31 T09S R22E 1994 FNL 1808 FEL
- 43-047-50679 NBU 922-31G4CS Sec 31 T09S R22E 2316 FSL 0198 FEL BHL Sec 31 T09S R22E 2353 FNL 1796 FEL
- 43-047-50680 NBU 922-31I1AS Sec 31 T09S R22E 2317 FSL 0178 FEL BHL Sec 31 T09S R22E 2483 FSL 0243 FEL
- 43-047-50681 NBU 922-3111DS Sec 31 T09S R22E 2317 FSL 0168 FEL BHL Sec 31 T09S R22E 2137 FSL 0264 FEL
- 43-047-50682 NBU 921-12J Sec 12 T09S R21E 1959 FSL 2051 FEL
- 43-047-50684 NBU 1022-6I3AS Sec 06 T10S R22E 1160 FSL 1584 FEL BHL Sec 06 T10S R22E 1684 FSL 1167 FEL
- 43-047-50685 NBU 1022-6J4CS Sec 06 T10S R22E 1178 FSL 1593 FEL BHL Sec 06 T10S R22E 1535 FSL 1760 FEL
- 43-047-50686 NBU 1022-6O1BS Sec 06 T10S R22E 1124 FSL 1567 FEL BHL Sec 06 T10S R22E 1197 FSL 1811 FEL

Page 3

API # WELL NAME

LOCATION

(Proposed PZ WASATCH-MESA VERDE)

43-047-50687 NBU 1022-6P1CS Sec 06 T10S R22E 1142 FSL 1575 FEL BHL Sec 06 T10S R22E 0989 FSL 0541 FEL

43-047-50691 NBU 921-29A3AS Sec 29 T09S R21E 0299 FNL 2630 FEL BHL Sec 29 T09S R21E 0700 FNL 0885 FEL

43-047-50692 NBU 921-29A3DS Sec 29 T09S R21E 0303 FNL 2628 FWL BHL Sec 29 T09S R21E 1193 FNL 0885 FEL

43-047-50694 NBU 921-29A2AS Sec 29 T09S R21E 0296 FNL 2611 FEL BHL Sec 29 T09S R21E 0209 FNL 0885 FEL

43-047-50693 NBU 921-29B2CS Sec 29 T09S R21E 0307 FNL 2608 FWL BHL Sec 29 T09S R21E 0443 FNL 2635 FEL

43-047-50695 NBU 921-12N Sec 12 T09S R21E 0441 FSL 2236 FWL

43-047-50698 NBU 921-19F Sec 19 T09S R21E 2236 FNL 2285 FWL

43-047-50699 NBU 921-17C Sec 17 T09S R21E 0656 FNL 2004 FWL

43-047-50700 NBU 921-17D Sec 17 T09S R21E 0985 FNL 0418 FWL

43-047-50701 NBU 921-17G Sec 17 T09S R21E 1500 FNL 2262 FEL

43-047-50702 NBU 921-17H Sec 17 T09S R21E 2100 FNL 0553 FEL

43-047-50703 NBU 921-18P Sec 18 T09S R21E 1080 FSL 0197 FEL

43-047-50704 NBU 921-19E Sec 19 T09S R21E 2061 FNL 0842 FWL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File – Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron

# WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED:	8/17/2009		API NO. ASSIGNED:	43047506440000
WELL NAME:	NBU 922-30C3S			
OPERATOR:	KERR-MCGEE OIL & GAS ON	SHORE, L.P. (N2995)	PHONE NUMBER:	720 929-6156
CONTACT:	Danielle Piernot			
PROPOSED LOCATION:	NWNW 30 090S 220E		Permit Tech Review:	<u>r</u>
SURFACE:	1253 FNL 0663 FWL		Engineering Review:	<u> </u>
воттом:	1238 FNL 1154 FWL		Geology Review:	
COUNTY:	UINTAH			
LATITUDE:	40.01084		LONGITUDE:	-109.48758
<b>UTM SURF EASTINGS:</b>	629085.00		NORTHINGS:	4429845.00
FIELD NAME:	NATURAL BUTTES			
LEASE TYPE:	1 - Federal			
LEASE NUMBER:	UTU 0463 PROPOSE	ED PRODUCING FORMATION	ON(S): WASATCH-MESA	VERDE
SURFACE OWNER:	1 - Federal		COALBED METHANE:	NO
RECEIVED AND/OR REVIE	EWED:	LOCATION AND SITING:		
<b></b> PLAT		R649-2-3.		
<b>▶ Bond:</b> FEDERAL - WYB	000291	Unit: NATURAL BUTTES	;	
Potash		R649-3-2. General		
☑️ Oil Shale 190-5				
Oil Shale 190-3		<b>№</b> R649-3-3. Exception	1	
Oil Shale 190-13		Drilling Unit		
Water Permit: Permit	#43-8496	Board Cause No:	lause 173-14	
RDCC Review:		Effective Date: 12/	′2/1999	
Fee Surface Agreeme	ent	Siting: 460' fr u bdi	ry & uncomm. tract	
Intent to Commingle		<b>№</b> R649-3-11. Direction	nal Drill	
Commingling Approved	d			
Comments: Presite C	Completed			
Stipulations: 1 - Exce	eption Location - dmason			

3 - Exception Location - diffusion 3 - Commingling - ddoucet 4 - Federal Approval - dmason 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason



# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER

Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

# **Permit To Drill**

\*\*\*\*\*\*

Well Name: NBU 922-30C3S API Well Number: 43047506440000

**Lease Number:** UTU 0463 **Surface Owner:** FEDERAL **Approval Date:** 9/1/2009

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Exception Location:**

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

#### **Commingle:**

In accordance with Board Cause No. 173-14 commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

 Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)
 OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at https://oilgas.ogm.utah.gov

## **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

Approved By:

Gil Hunt

Associate Director, Oil & Gas

J Alu

	STATE OF UTAH	_	FORM 9		
	DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463		
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
bottom-hole depth, reenter plu	Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047506440000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	<b>PHON</b> Street, Suite 600, Denver, CO, 80217 3779	NE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI	IP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 22.0E Meridian:	S	STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	☐ ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME		
8/31/2010	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK		
_	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
	☐ TUBING REPAIR	☐ VENT OR FLARE	WATER DISPOSAL		
DRILLING REPORT	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION		
Report Date:	□ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12 DESCRIBE PROPOSED OR CO	DMPLETED OPERATIONS. Clearly show all pert	rinent details including dates, denths, v	volumes etc		
Kerr-McGee Oil & G extension to this A	ias Onshore, L.P. (Kerr-McGee) APD for the maximum time allowith any questions and/or con	) respectfully requests an owed. Please contact the	Approved by the Utah Division of Oil, Gas and Mining		
		D	ate: August 31, 2010		
			L open 10		
		В	A: Dynamics		
			7 0		
NAME (PLEASE PRINT)	PHONE NUMBER	TITLE			
Danielle Piernot	720 929-6156	Regulatory Analyst			
SIGNATURE N/A		<b>DATE</b> 8/30/2010			



## The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

# Request for Permit Extension Validation Well Number 43047506440000

**API:** 43047506440000 Well Name: NBU 922-30C3S

Location: 1253 FNL 0663 FWL QTR NWNW SEC 30 TWNP 090S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 8/31/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that requ

uire revi: • If loca	tion as submitted in th sion. Following is a che ated on private land, h	ecklist of so	me items related to	the application	on, whic	h should be v	
-	ed? 🔵 Yes 📵 No						
	any wells been drilled requirements for this			well which wo	ould affe	ct the spacing	j or
	nere been any unit or o s proposed well?			hat could affe	ct the p	ermitting or o	peration
	there been any change the proposed location			ownership, o	r righto	f- way, which	could
• Has th	ne approved source of	water for d	rilling changed? 🔵	Yes 📵 No			
	there been any physica e in plans from what v				oute wh Yes 📵	-	re a
• Is bor	nding still in place, whi	ch covers t	his proposed well?	Yes	No Uta	proved by the h Division of Gas and Min	of
nature:	Danielle Piernot	Date:	8/30/2010				
Title:	Regulatory Analyst Rep			AS ONSHOR₽	<u>te;</u>	August 31, 20	10
-	, , , ,	•		,	D 00	Off his c	

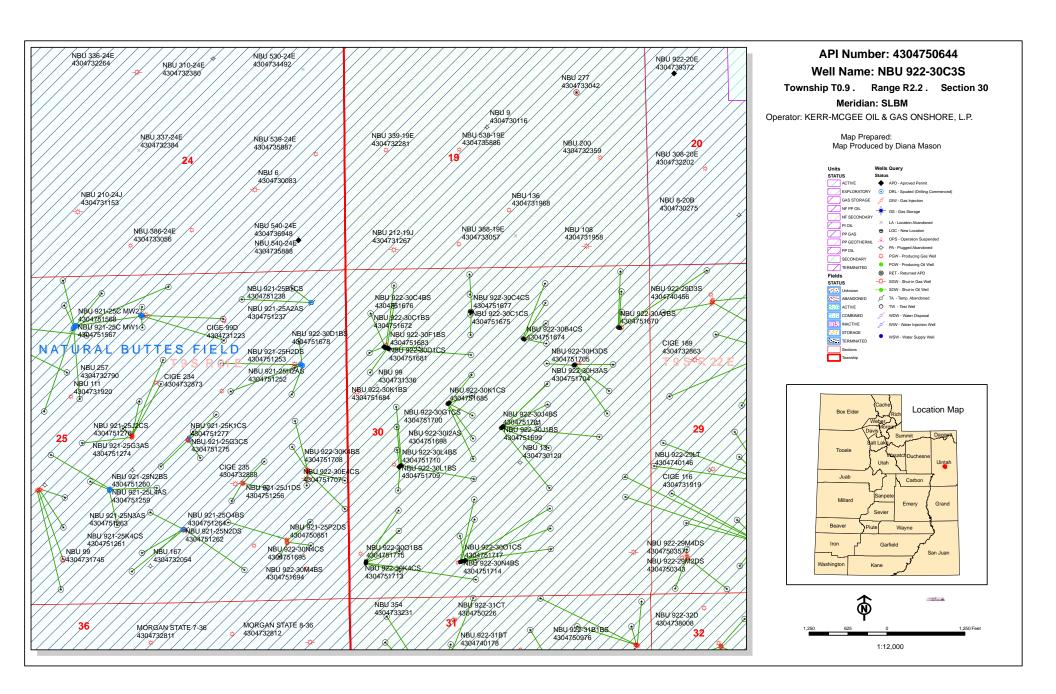
Sig

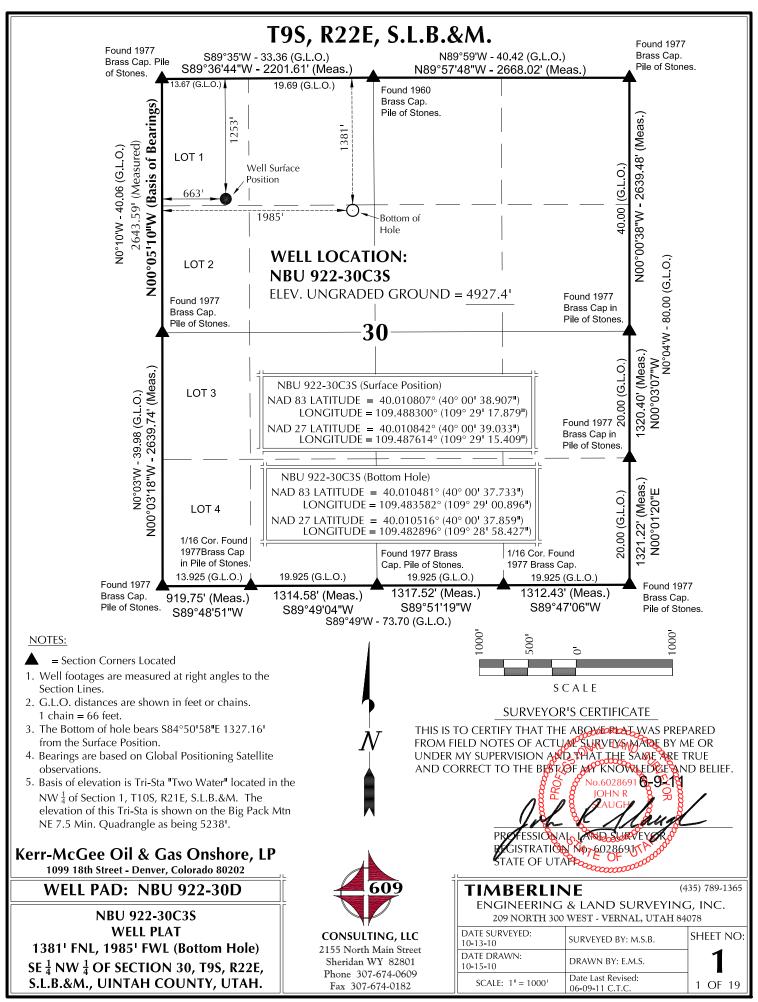
By: Dolly

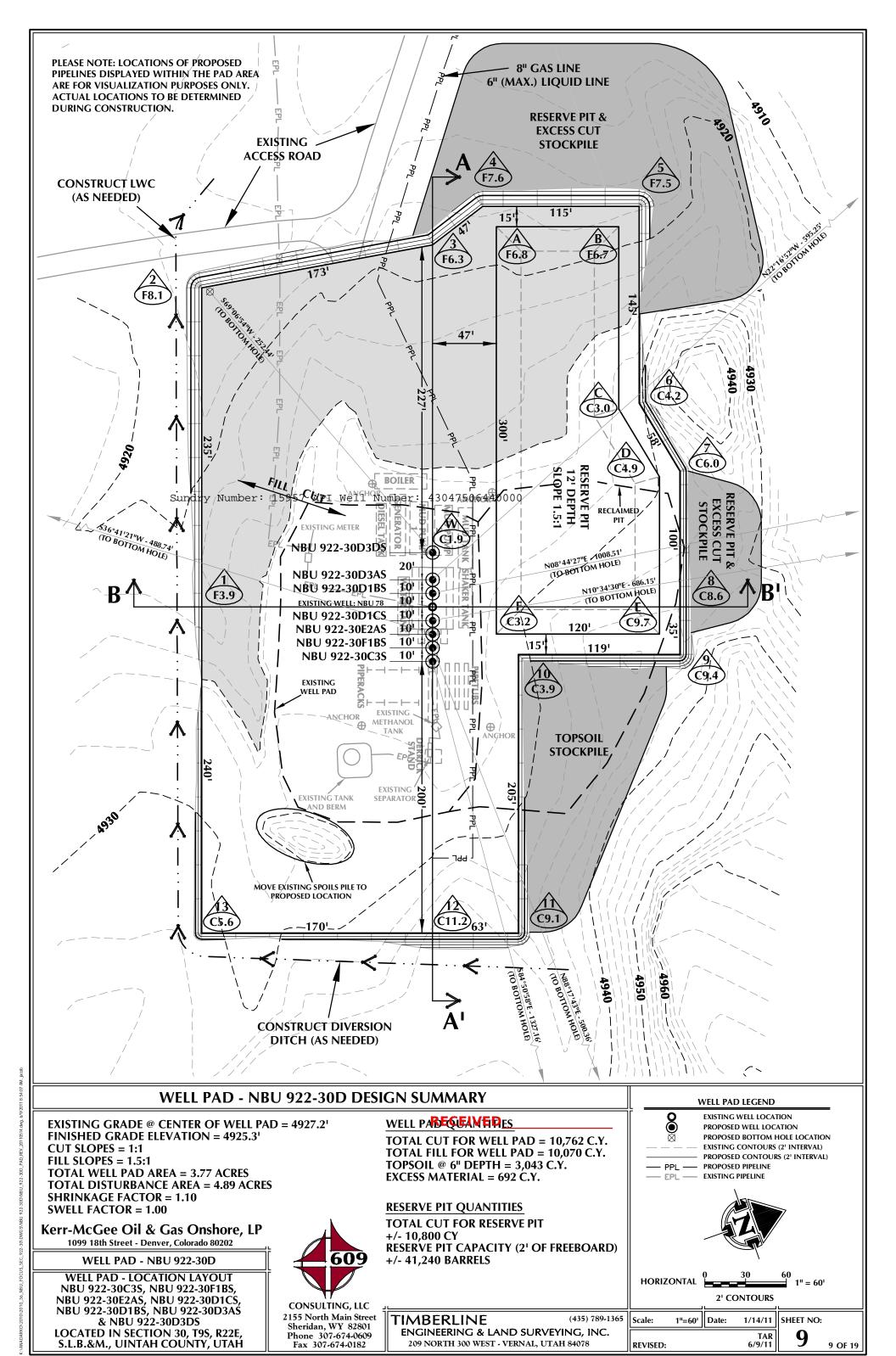
Sundry Number: 1-5957a Approval of this: 43047506440000

Action is Necessary

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	IG	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463
SUNDF	RY NOTICES AND REPORTS O	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	sals to drill new wells, significantly deepen ex agged wells, or to drill horizontal laterals. Use		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047506440000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE Street, Suite 600, Denver, CO, 80217 3779	NUMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 30	IP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 22.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
The above caption Kerr-McGee Oil & G Drilling Program, th Operations. Please advised that in addition	□ ACIDIZE  ✓ CHANGE TO PREVIOUS PLANS □ CHANGE WELL STATUS □ DEEPEN □ OPERATOR CHANGE □ PRODUCTION START OR RESUME □ REPERFORATE CURRENT FORMATION □ TUBING REPAIR □ WATER SHUTOFF □ WILDCAT WELL DETERMINATION  DIMPLETED OPERATIONS. Clearly show all pertine as as, L.P. (Kerr-McGee) has revise the Directional Drilling Plan and the see the attachment reflecting the on to these changes, the BHL had 1238' FNL and 1154' FWL to 1 Thank you.	pproved on 9/1/2009.  ed the Survey Plats, the he Surface Use Plan of lese changes. Please be as been changed from the 381' FNL & 1985' FWL.	Approved by the Utah Division of
NAME (PLEASE PRINT) Laura Abrams	<b>PHONE NUMBER</b> 720 929-6356	TITLE Regulatory Analyst II	
SIGNATURE	720 323-0330	DATE	
N/A		6/15/2011	

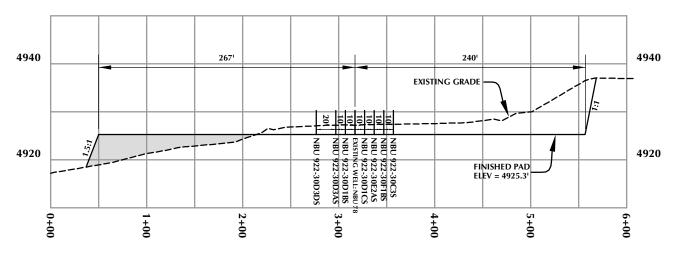




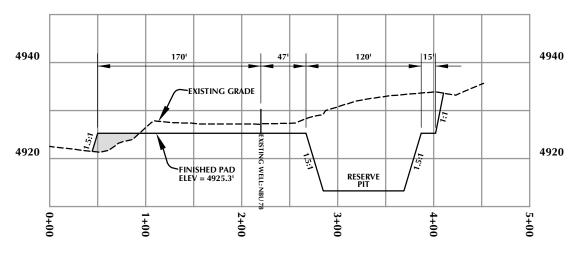


Jun. 15, 2011





# **CROSS SECTION A-A'**



# Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-30D

WELL PAD - CROSS SECTIONS
NBU 922-30C3S, NBU 922-30F1BS,
NBU 922-30E2AS, NBU 922-30D1CS,
NBU 922-30D1BS, NBU 922-30D3AS
& NBU 922-30D3DS
LOCATED IN SECTION 30, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

# **CROSS SECTION B-B¹**

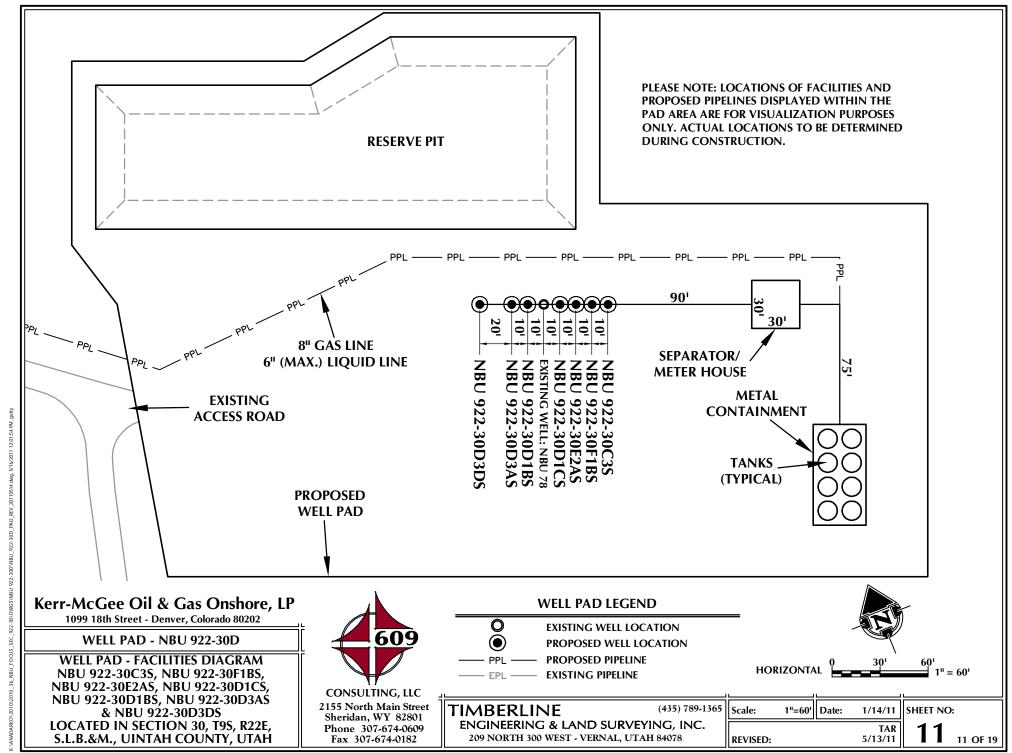
NOTE: CROSS SECTION B-B<sup>1</sup> DEPICTS MAXIMUM RESERVE PIT DEPTH.



CONSULTING, LLC 2155 North Main Street Sheridan, WY 82801 Phone 307-674-0609 Fax 307-674-0182

HORIZONTAL	0	50	100
VERTICAL	0	10	1" = 20'

TIMBERLINE (435) 789-1365 ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078 RE



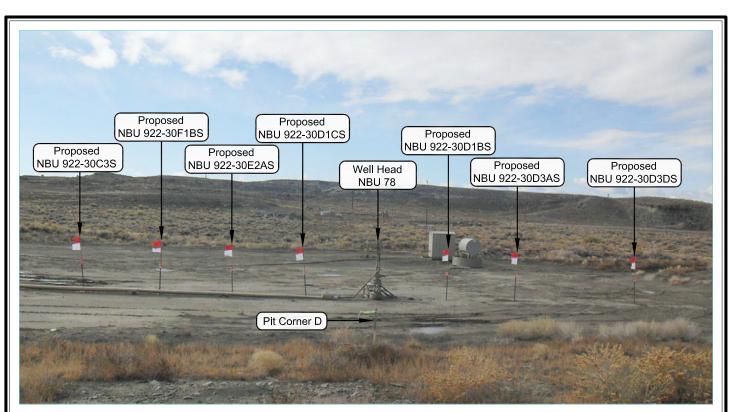


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

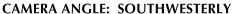




PHOTO VIEW: FROM EXISTING ACCESS ROAD

#### **CAMERA ANGLE: SOUTHEASTERLY**

# Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

#### WELL PAD - NBU 922-30D

LOCATION PHOTOS

NBU 922-30C3S, NBU 922-30F1BS,
NBU 922-30E2AS, NBU 922-30D1CS,
NBU 922-30D1BS, NBU 922-30D3AS &
NBU 922-30D3DS

LOCATED IN SECTION 30, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH.



#### CONSULTING, LLC

2155 North Main Street Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

#### TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC. 209 NORTH 300 WEST - VERNAL, UTAH 84078

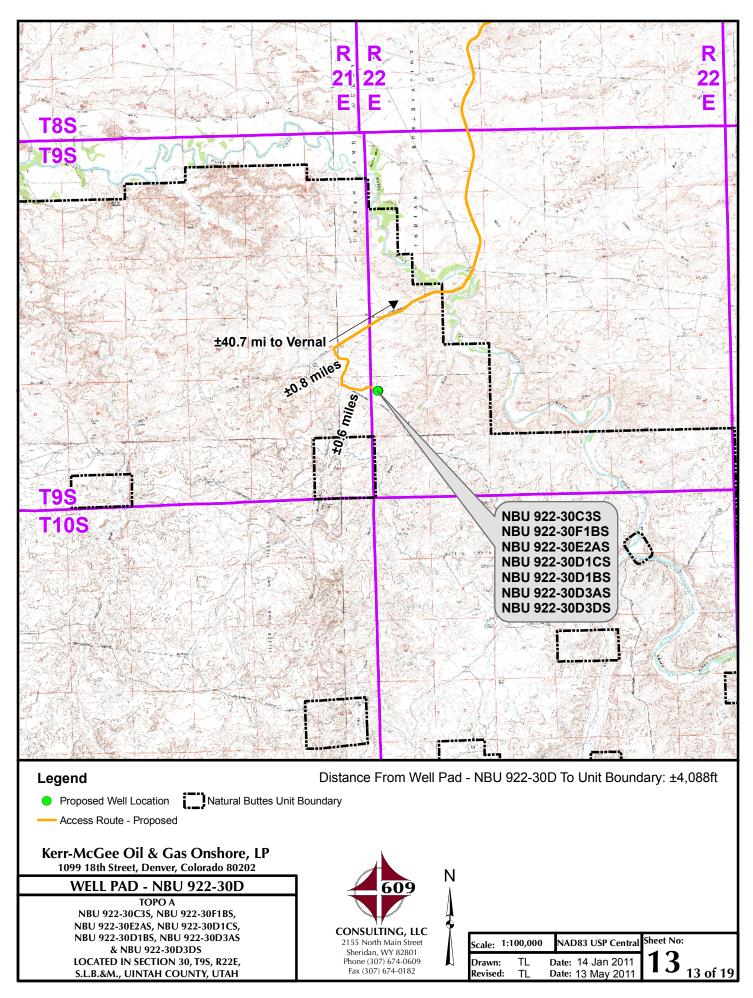
DATE PHOTOS TAKEN: 10-13-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO:
DATE DRAWN: 10-15-10	DRAWN BY: E.M.S.	12
Date Last Revised: 10-28-1	0 E.M.S.	12 OF 19

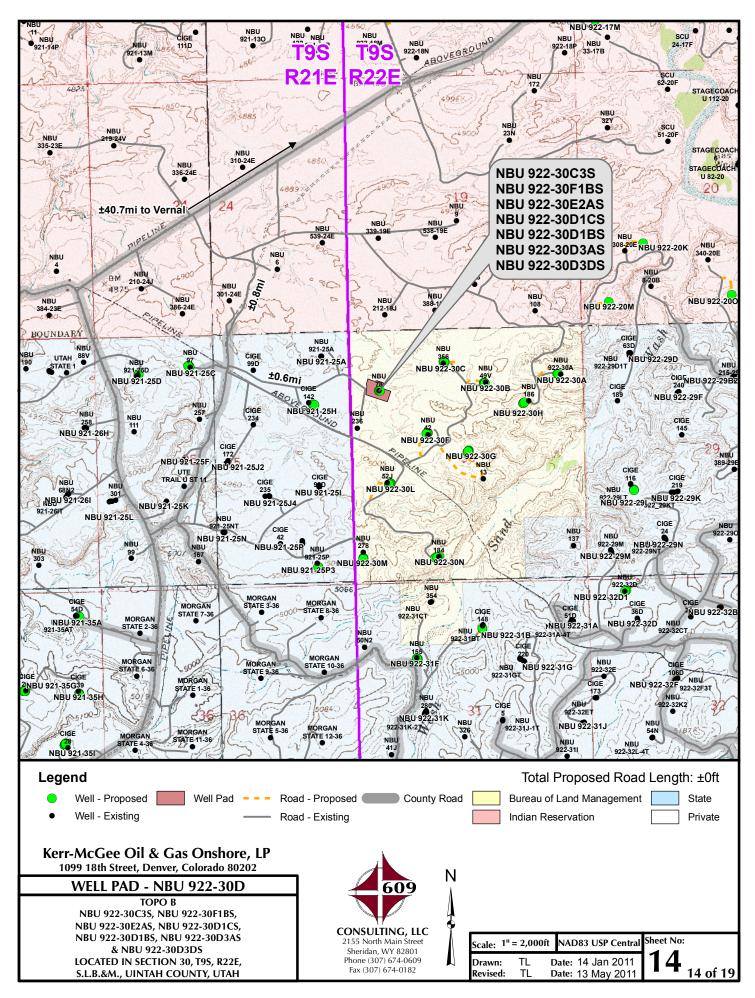
Kerr-McGee Oil & Gas Onshore, LP WELL PAD – NBU 922-30D WELLS – NBU 922-30C3S, NBU 922-30F1BS, NBU 922-30E2AS, NBU 922-30D1CS, NBU 922-30D1BS, NBU 922-30D3AS & NBU 922-30D3DS Section 30, T9S, R22E, S.L.B.&M.

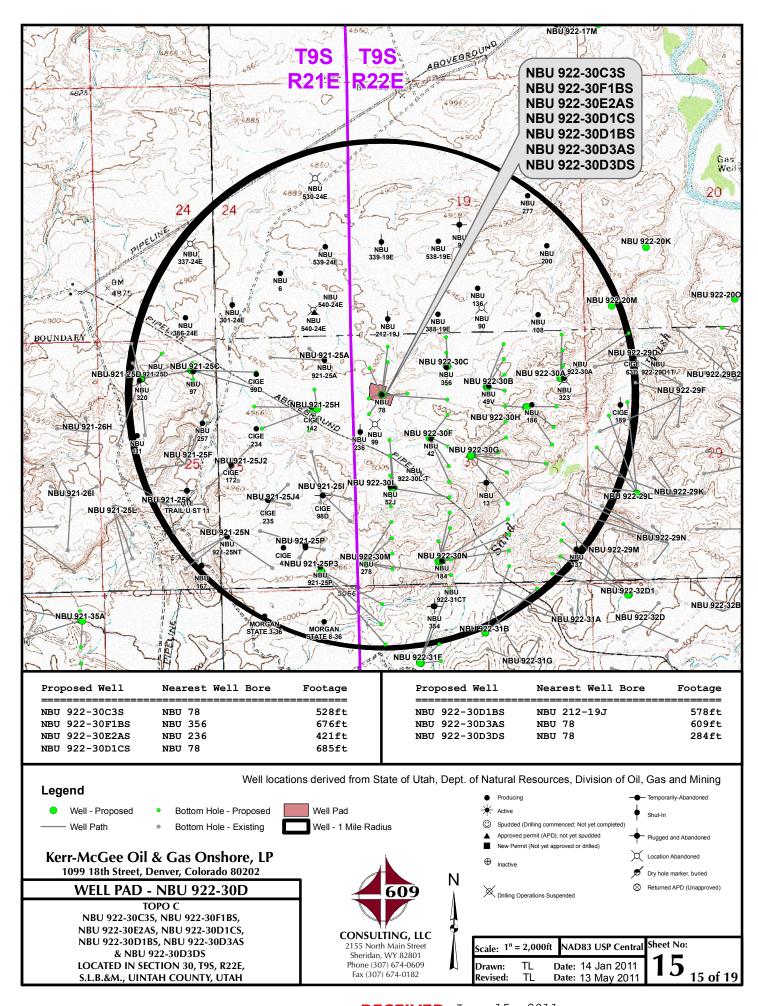
From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 17.2 miles to a service road to the southeast. Exit left and proceed in a southeasterly, then easterly, then southerly direction along the service road approximately 0.8 miles to a second service road to the southeast. Exit left and proceed in a southeasterly direction along the second service road approximately 0.6 miles to the proposed well location.

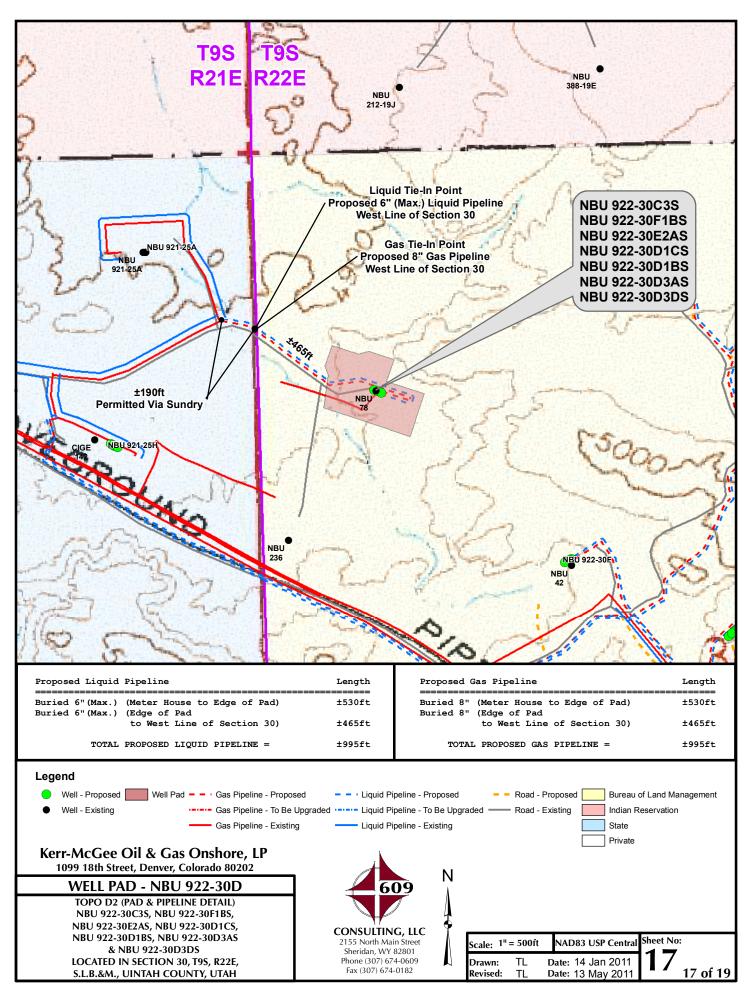
Total distance from Vernal, Utah to the proposed well location is approximately 42.1 miles in a southerly direction.

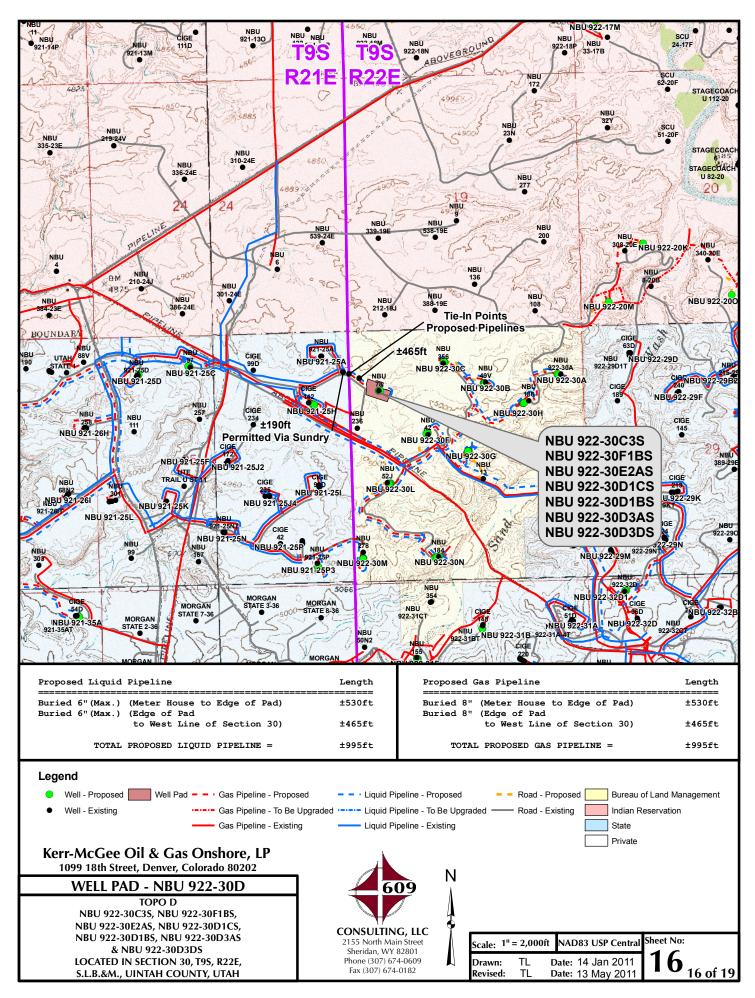
**SHEET 19 OF 19** 

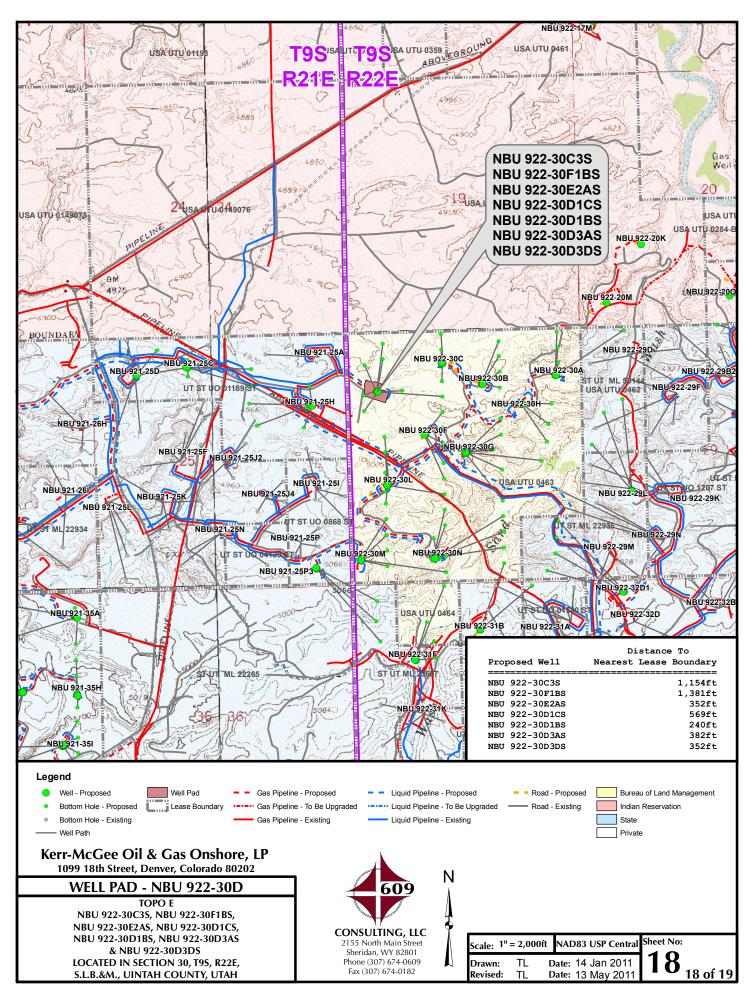












NBU 922-30D Pad Drilling Program
1 of 7

## Kerr-McGee Oil & Gas Onshore. L.P.

#### NBU 922-30C3S

Surface: 1253 FNL / 663 FWL NWNW
BHL: 1381 FNL / 1985 FWL SENW

Section 30 T9S R22E

Uintah County, Utah Mineral Lease: UTU-0463

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

# Estimated Tops of Important Geologic Markers: Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1449	
Birds Nest	1758	Water
Mahogany	2120	Water
Wasatch	4715	Gas
Mesaverde	7355	Gas
MVU2	8286	Gas
MVL1	8804	Gas
TVD	9579	
TD	9766	

#### 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

#### 4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

#### 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program

#### 6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

NBU 922-30D Pad Drilling Program 2 of 7

#### 7. <u>Abnormal Conditions</u>:

Maximum anticipated bottom hole pressure calculated at 9553' TVD, approximately equals 6,101 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,010 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

#### 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

#### 9. Variances:

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- · Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 922-30D Pad Drilling Program 3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 922-30D Pad Drilling Program 4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

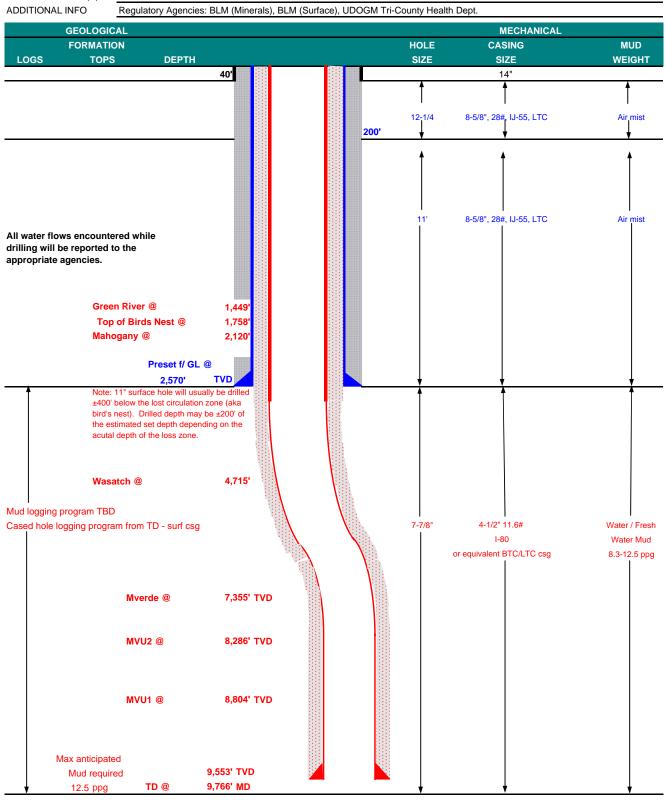
#### 10. Other Information:

Please refer to the attached Drilling Program.



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME KERR-McGEE OIL & GAS ONSHORE LP DATE June 15, 2011 NBU 922-30C3S WELL NAME TD 9,766' MD 9,553' TVD STATE Utah FINISHED ELEVATION **FIELD** Natural Buttes **COUNTY Uintah** 4925' SURFACE LOCATION NWNW 1253 FNL 663 FWL Sec 30 T 9S R 22E Latitude: 40.010807 Longitude: -109.488300 NAD 83 BTM HOLE LOCATION SENW 1381 FNL 1985 FWL Sec 30 T 9S R 22E Latitude: 40.010480 -109.483580 NAD 83 Longitude: OBJECTIVE ZONE(S) Wasatch/Mesaverde





#### **KERR-McGEE OIL & GAS ONSHORE LP**

#### DRILLING PROGRAM

CASING PROGRAM							DESIGN F	ACTORS			
										LTC	BTC
	SIZE	INT	ERVAL		WT.	GR.	CPLG.	BURST	COLLA	PSE	TENSION
CONDUCTOR	14"	(	)-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,570	28.00	IJ-55	LTC	2.10	1.56	5.52	N/A
								7,780	6,350	279,000	367,000
PRODUCTION	4-1/2"	0	to	9,766	11.60	I-80	LTC/BTC	1.11	1.02	3.04	4.00

**Surface Casing:** 

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	IT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1		+ 0.25 pps flocele					
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water	to surface, o	option 2 will	be utilized		
Option 2 LEAD	2,070'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00		3.82
		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION LEAD	4,206'	Premium Lite II +0.25 pps	320	20%	11.00		3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	5,560'	50/50 Poz/G + 10% salt + 2% gel	1,310	35%	14.30		1.31
		+ 0.1% R-3					

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe				
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.				

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

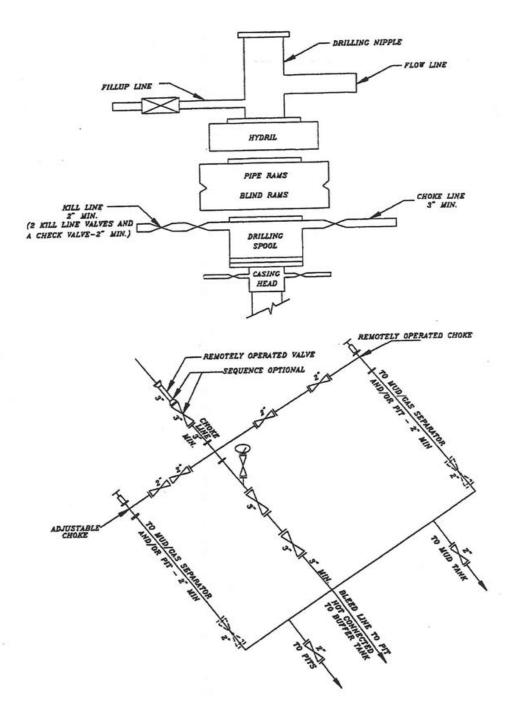
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

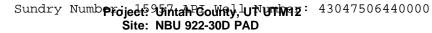
Surveys will be taken at 1,000' minimum intervals.
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING	ENGINEER:		DATE:			
		Nick Spence / Emile Goodwin	•			
DRILLING	SUPERINTENDENT:		DATE:			
		Kenny Gathings / Lovel Young				

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

# EXHIBIT A NBU 922-30C3S





Well: NBU 922-30C3S

Wellbore: OH

Design: PLAN #1 PRELIMINARY



Longitude 109° 29' 15.410 W

		WEL	L DETAILS: NBU	922-30C3S
		GL 4925	' & KB 9' @ 4934.0	Ooft (ASSUMED)
+N/-S 0.00	+E/-W 0.00	Northing 14533586.35	Easting 2063914.56	Latittude 40° 0' 39.031 N

Scientific Drilling

Rocky Mountain Operations

**DESIGN TARGET DETAILS** 

Name	TVD	+N/-S	+E/-W	Northing	Easting 2065237.77	Latitude	Longitude Shape
PBHL	9553.00	-118.70	1321.39	14533490.10		40° 0' 37.858 N	109° 28' 58.426 WCircle (Radius: 25.0
	- plan hits targ	get center					

	FORMAT	ION TOP DETAILS			CASING DET	AILS		
TVDPath 1436.00 4712.00 7335.00	MDPath 1466.21 4925.08 7548.38	Formation GREEN RIVER WASATCH MESAVERDE	0.00 0.00 0.00	TVD 2568.00	MD 2670.86	Name 8 5/8"	Size 8.625	

#### **SECTION DETAILS**

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1300.00	20.00	95.13	1279.82	-15.46	172.08	2.00	95.13	172.77	
4168.75	20.00	95.13	3975.56	-103.24	1149.31	0.00	0.00	1153.94	
5168.75	0.00	0.00	4955.38	-118.70	1321.39	2.00	180.00	1326.71	
9766.38	0.00	0.00	9553.00	-118.70	1321.39	0.00	0.00	1326.71	PBHL_NBU 922-30C3S

#### PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)

Datum: NAD 1927 - Western US

Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 30 T9S R22E

System Datum: Mean Sea Level

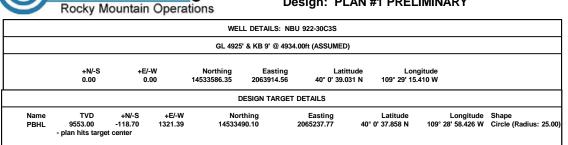
Sundry Numb**project** Stintah County, luthuning: 43047506440000

Site: NBU 922-30D PAD Well: NBU 922-30C3S

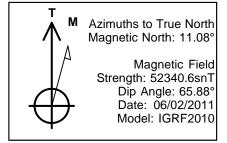
Wellbore: OH

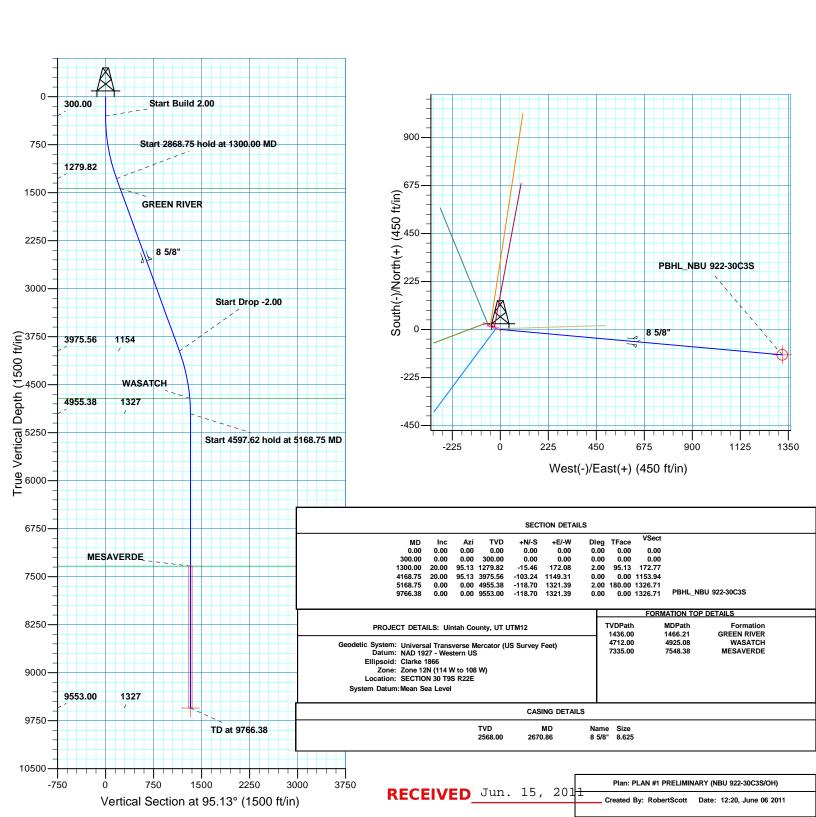
Design: PLAN #1 PRELIMINARY





Scientific Drilling







# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 NBU 922-30D PAD NBU 922-30C3S

ОН

Plan: PLAN #1 PRELIMINARY

# **Standard Planning Report**

06 June, 2011





## SDI Planning Report



EDM5000-RobertS-Local Database:

Company: Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12 NBU 922-30D PAD Site:

Well: NBU 922-30C3S

Wellbore: ОН

PLAN #1 PRELIMINARY Design:

**Local Co-ordinate Reference:** 

**TVD Reference:** MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 922-30C3S

GL 4925' & KB 9' @ 4934.00ft (ASSUMED) GL 4925' & KB 9' @ 4934.00ft (ASSUMED)

True

Minimum Curvature

Project Uintah County, UT UTM12

Universal Transverse Mercator (US Survey Feet) Map System:

NAD 1927 - Western US Geo Datum: Zone 12N (114 W to 108 W) Map Zone:

System Datum: Mean Sea Level

NBU 922-30D PAD, SECTION 30 T9S R22E Site

Northing: 14,533,586.35 usft Site Position: Latitude: 40° 0' 39.031 N From: Lat/Long Easting: 2,063,914.56 usft Longitude: 109° 29' 15.410 W **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.97 13.200 in

Well NBU 922-30C3S, 1253 FNL 662 FWL

**Well Position** +N/-S 0.00 ft 14,533,586.35 usft Latitude: 40° 0' 39.031 N Northing: +E/-W 0.00 ft Easting: 2,063,914.56 usft Longitude: 109° 29' 15.410 W

**Position Uncertainty** 0.00 ft Wellhead Elevation: **Ground Level:** 4,925.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 06/02/2011 11.08 65.88 52.341

PLAN #1 PRELIMINARY Design **Audit Notes:** Version: Phase: PLAN Tie On Depth: 0.00 **Vertical Section:** Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 95.13

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	20.00	95.13	1,279.82	-15.46	172.08	2.00	2.00	0.00	95.13	
4,168.75	20.00	95.13	3,975.56	-103.24	1,149.31	0.00	0.00	0.00	0.00	
5,168.75	0.00	0.00	4,955.38	-118.70	1,321.39	2.00	-2.00	0.00	180.00	
9,766.38	0.00	0.00	9,553.00	-118.70	1,321.39	0.00	0.00	0.00	0.00 I	PBHL_NBU 922-30C



# SDI Planning Report



EDM5000-RobertS-Local Database:

Kerr McGee Oil and Gas Onshore LP

Company: Project: Uintah County, UT UTM12 NBU 922-30D PAD Site:

Well: NBU 922-30C3S

Wellbore: ОН

Design: PLAN #1 PRELIMINARY Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 922-30C3S

GL 4925' & KB 9' @ 4934.00ft (ASSUMED) GL 4925' & KB 9' @ 4934.00ft (ASSUMED)

True

Minimum Curvature

gn:	PI	LAN #1 PRE	LIMINART							
ned Survey										
Measure Depth (ft)		clination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0	.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200	.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300	.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Bu	uild 2.00									
400	.00	2.00	95.13	399.98	-0.16	1.74	1.75	2.00	2.00	0.00
500	00	4.00	95.13	499.84	-0.62	6.95	6.98	2.00	2.00	0.00
600		6.00	95.13	599.45	-1.40	15.63	15.69	2.00	2.00	0.00
700		8.00	95.13	698.70	-2.49	27.77	27.88	2.00	2.00	0.00
800		10.00	95.13	797.47	-3.89	43.35	43.52	2.00	2.00	0.00
900		12.00	95.13	895.62	-5.60	62.35	62.60	2.00	2.00	0.00
900	.00	12.00	93.13			02.33			2.00	0.00
1,000	.00	14.00	95.13	993.06	-7.61	84.76	85.10	2.00	2.00	0.00
1,100		16.00	95.13	1,089.64	-9.93	110.53	110.98	2.00	2.00	0.00
1,200		18.00	95.13	1,185.27	-12.54	139.65	140.21	2.00	2.00	0.00
1,300	.00	20.00	95.13	1,279.82	-15.46	172.08	172.77	2.00	2.00	0.00
Start 28	68.75 ho	ld at 1300.00	MD							
1,400	.00	20.00	95.13	1,373.78	-18.52	206.14	206.97	0.00	0.00	0.00
1,466	21	20.00	95.13	1,436.00	-20.54	228.69	229.61	0.00	0.00	0.00
GREEN		20.00	55.15	1, 100.00	20.07	220.00	220.01	0.00	0.00	0.00
1.500		20.00	95.13	1,467.75	-21.58	240.20	241.17	0.00	0.00	0.00
1,600		20.00	95.13	1,561.72	-24.64	274.27	275.37	0.00	0.00	0.00
1,700		20.00	95.13	1,655.69	-27.70	308.33	309.58	0.00	0.00	0.00
1,800		20.00	95.13	1,749.66	-30.76	342.40	343.78	0.00	0.00	0.00
1,900		20.00	95.13	1,843.63	-33.82	376.46	377.98	0.00	0.00	0.00
2,000		20.00	95.13	1,937.60	-36.88	410.53	412.18	0.00	0.00	0.00
2,100		20.00	95.13	2,031.57	-39.94	444.59	446.38	0.00	0.00	0.00
2,200		20.00	95.13	2,125.54	-43.00	478.66	480.59	0.00	0.00	0.00
2,300	.00	20.00	95.13	2,219.51	-46.06	512.72	514.79	0.00	0.00	0.00
2,400	.00	20.00	95.13	2,313.48	-49.12	546.79	548.99	0.00	0.00	0.00
2,500	.00	20.00	95.13	2,407.45	-52.18	580.85	583.19	0.00	0.00	0.00
2,600	.00	20.00	95.13	2,501.42	-55.24	614.92	617.39	0.00	0.00	0.00
2,670		20.00	95.13	2,568.00	-57.41	639.06	641.63	0.00	0.00	0.00
8 5/8"										
2,700	.00	20.00	95.13	2,595.39	-58.30	648.98	651.60	0.00	0.00	0.00
2,800		20.00	95.13	2,689.35	-61.36	683.05	685.80	0.00	0.00	0.00
2,800		20.00	95.13 95.13	2,009.33	-61.36 -64.42	717.11	720.00	0.00	0.00	0.00
3,000		20.00	95.13 95.13	2,763.32	-64.42 -67.48	717.11 751.18	720.00 754.20	0.00	0.00	0.00
3,100		20.00	95.13	2,971.26	-70.54	785.24	788.40	0.00	0.00	0.00
3,100		20.00	95.13	3,065.23	-73.60	819.31	822.61	0.00	0.00	0.00
3,300		20.00	95.13	3,159.20	-76.66	853.37	856.81	0.00	0.00	0.00
3,400		20.00	95.13	3,253.17	-79.72	887.44	891.01	0.00	0.00	0.00
3,500		20.00	95.13	3,347.14	-82.78	921.50	925.21	0.00	0.00	0.00
3,600		20.00	95.13	3,441.11	-85.84	955.57	959.41	0.00	0.00	0.00
3,700	.00	20.00	95.13	3,535.08	-88.90	989.63	993.62	0.00	0.00	0.00
3,800	.00	20.00	95.13	3,629.05	-91.96	1,023.70	1,027.82	0.00	0.00	0.00
3,900		20.00	95.13	3,723.02	-95.02	1,057.76	1,062.02	0.00	0.00	0.00
4,000		20.00	95.13	3,816.99	-98.08	1,091.83	1,096.22	0.00	0.00	0.00
4,100		20.00	95.13	3,910.95	-101.14	1,125.89	1,130.42	0.00	0.00	0.00
4,168		20.00	95.13	3,975.56	-103.24	1,149.31	1,153.94	0.00	0.00	0.00
Start Dr	op -2.00									
4,200	00	19.38	95.13	4,004.98	-104.18	1,159.80	1,164.47	2.00	-2.00	0.00
4,200		17.38	95.13	4,004.98	-104.18	1,191.19	1,104.47	2.00	-2.00	0.00
4,400		15.38	95.13	4,195.82	-107.50	1,219.27	1,224.18	2.00	-2.00	0.00
4,500		13.38	95.13	4,292.68	-111.75	1,244.00	1,249.00	2.00	-2.00	0.00



# SDI **Planning Report**



EDM5000-RobertS-Local Database: Company:

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12 NBU 922-30D PAD Site:

Well: NBU 922-30C3S

Wellbore: ОН

Design: PLAN #1 PRELIMINARY Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 922-30C3S

GL 4925' & KB 9' @ 4934.00ft (ASSUMED) GL 4925' & KB 9' @ 4934.00ft (ASSUMED)

True

Minimum Curvature

sign.	T ES (IV // TTTCE	Envin v a ci							
anned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.00	11.38	95.13	4,390.35	-113.66	1,265.34	1,270.43	2.00	-2.00	0.00
4,700.00	9.38	95.13	4,488.71	-115.28	1,283.28	1,288.44	2.00	-2.00	0.00
4,800.00	7.38	95.13	4,587.64	-116.58	1,297.78	1,303.01	2.00	-2.00	0.00
4,900.00	5.38	95.13	4,687.02	-117.57	1,308.84	1,314.11	2.00	-2.00	0.00
4,925.08	4.87	95.13	4,712.00	-117.77	1,311.07	1,316.35	2.00	-2.00	0.00
WASATCH									
5,000.00	3.38	95.13	4,786.72	-118.25	1,316.44	1,321.74	2.00	-2.00	0.00
5,100.00	1.38	95.13	4,886.63	-118.63	1,320.57	1,325.88	2.00	-2.00	0.00
5,168.75	0.00	0.00	4,955.38	-118.70	1,321.39	1,326.71	2.00	-2.00	0.00
Start 4597.6	2 hold at 5168.75	5 MD							
5,200.00	0.00	0.00	4,986.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,300.00	0.00	0.00	5,086.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,400.00	0.00	0.00	5,186.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,500.00	0.00	0.00	5,286.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,600.00	0.00	0.00	5,386.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,700.00	0.00	0.00	5,486.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,800.00	0.00	0.00	5,586.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
5,900.00	0.00	0.00	5,686.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,000.00	0.00	0.00	5,786.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,100.00	0.00	0.00	5,886.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,200.00	0.00	0.00	5,986.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,300.00	0.00	0.00	6,086.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,400.00	0.00	0.00	6,186.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,500.00	0.00	0.00	6,286.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,600.00	0.00	0.00	6,386.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,700.00	0.00	0.00	6,486.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,800.00	0.00	0.00	6,586.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
6,900.00	0.00	0.00	6,686.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,000.00	0.00	0.00	6,786.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,100.00	0.00	0.00	6,886.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,200.00	0.00	0.00	6,986.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,300.00	0.00	0.00	7,086.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,400.00	0.00	0.00	7,186.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,500.00	0.00	0.00	7,286.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,548.38	0.00	0.00	7,335.00	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
MESAVERD	E								
7,600.00	0.00	0.00	7,386.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,700.00	0.00	0.00	7,486.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,800.00	0.00	0.00	7,586.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
7,900.00	0.00	0.00	7,686.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,000.00	0.00	0.00	7,786.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,100.00	0.00	0.00	7,886.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,200.00	0.00	0.00	7,986.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,300.00	0.00	0.00	8,086.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,400.00	0.00	0.00	8,186.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,500.00	0.00	0.00	8,286.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,600.00	0.00	0.00	8,386.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,700.00	0.00	0.00	8,486.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,800.00	0.00	0.00	8,586.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
8,900.00	0.00	0.00	8,686.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,000.00	0.00	0.00	8,786.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,100.00	0.00	0.00	8,886.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,200.00	0.00	0.00	8,986.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00



# SDI **Planning Report**



EDM5000-RobertS-Local Database: Company:

Kerr McGee Oil and Gas Onshore LP

Project: Uintah County, UT UTM12 NBU 922-30D PAD Site:

NBU 922-30C3S

Wellbore: ОН

Well:

Design: PLAN #1 PRELIMINARY Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well NBU 922-30C3S

GL 4925' & KB 9' @ 4934.00ft (ASSUMED) GL 4925' & KB 9' @ 4934.00ft (ASSUMED)

True

Minimum Curvature

ned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,300.00	0.00	0.00	9,086.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,400.00	0.00	0.00	9,186.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,500.00	0.00	0.00	9,286.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,600.00	0.00	0.00	9,386.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,700.00	0.00	0.00	9,486.62	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
9,766.38	0.00	0.00	9,553.00	-118.70	1,321.39	1,326.71	0.00	0.00	0.00
TD at 9766.3	8 - PBHL_NBU 9	922-30C3S							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-30C3S - plan hits target cen - Circle (radius 25.00		0.00	9,553.00	-118.70	1,321.39	14,533,490.10	2,065,237.77	40° 0' 37.858 N	109° 28' 58.426 W

Casing Points							
	Measured	Vertical			Casing	Hole	
	Depth	Depth			Diameter	Diameter	
	(ft)	(ft)		Name	(in)	(in)	
	2,670.86	2,568.00	8 5/8"		8.625	11.000	

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,466.21	1,436.00	GREEN RIVER		0.00	
	4,925.08	4,712.00	WASATCH		0.00	
	7,548.38	7,335.00	MESAVERDE		0.00	

Plan Annotations				
Measured	Vertical	Local Coord	dinates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
1,300.00	1,279.82	-15.46	172.08	Start 2868.75 hold at 1300.00 MD
4,168.75	3,975.56	-103.24	1,149.31	Start Drop -2.00
5,168.75	4,955.38	-118.70	1,321.39	Start 4597.62 hold at 5168.75 MD
9,766.38	9,553.00	-118.70	1,321.39	TD at 9766.38



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

April 4, 2011

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11

NBU 922-30C3S

T9S-R22E

Section 30 NWNW (Surf), NENW (Bottom)

Surface: 1253' FNL, 663' FWL

Bottom Hole: 1381' FNL, 1985' FWL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee's NBU 922-30C3S is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney

Sr. Staff Landman

Joe Matures

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 1 of 11

# Kerr-McGee Oil & Gas Onshore. L.P.

# NBU 922-30D Pad

API #4304750644	N	NBU 922-30C3S		
	Surface:	1253 FNL / 663 FWL	NWNW	Lot 1
	BHL:	1381 FNL / 1985 FWL	SENW	Lot
<u>API #</u>	N	NBU 922-30D1BS		
	Surface:	1236 FNL / 616 FWL	NWNW	Lot 1
	BHL:	240 FNL / 771 FWL	NWNW	Lot 1
<u>API #</u>	N	NBU 922-30D1CS		
	Surface:	1243 FNL / 635 FWL	NWNW	Lot 1
	BHL:	569 FNL / 762 FWL	NWNW	Lot 1
API #4304750645	N	IBU 922-30D3AS		
	Surface:	1232 FNL / 607 FWL	NWNW	Lot 1
	BHL:	680 FNL / 382 FWL	NWNW	Lot 1
API #4304750655	Ŋ	NBU 922-30D3DS		
	Surface:	1226 FNL / 588 FWL	NWNW	Lot 1
	BHL:	1314 FNL / 352 FWL	NWNW	Lot 1
API #4304750656	N	IBU 922-30E2AS		
	Surface:	1246 FNL / 645 FWL	NWNW	Lot 1
	BHL:	1636 FNL / 352 FWL	SWNW	Lot 2
<u>API #</u>	N	NBU 922-30F1BS		
	Surface:	1249 FNL / 654 FWL	NWNW	Lot 1
	BHL:	1238 FNL / 1154 FWL	NENW	Lot

This Surface Use Plan of Operations (SUPO) or 13-point plan provides site-specific information for the above-referenced wells.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

An on-site meeting was held on May 5, 2011. Present were:

- David Gordon, Melissa Wardle, Karl Wright and Dan Emmett BLM; and
- · Jacob Dunham 609 Consulting, LLC; and
- · Andy Lytle, Charles Chase, Ken Gathings, Roger Parry, Grizz Oleen, and Sheila Wopsock Kerr-McGee

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 2 of 11

#### A. Existing Roads:

Existing roads consist of county and improved/unimproved access roads (two-tracks). In accordance with Onshore Order #1, Kerr-McGee will, in accordance with BMPs, improve or maintain existing roads in a condition that is the same as or better than before operations began. New or reconstructed proposed access roads are discussed in Section B.

The existing roads will be maintained in a safe and usable condition. Maintenance for existing roads will continue until final abandonment and reclamation of well pads and/or other facilities, as applicable. Road maintenance will include, but is not limited to, blading, ditching, and/or culvert installation and cleanout. To ensure safe operating conditions, gravel surfacing will be performed where excessive rutting or erosion may occur. Dust control will be performed as necessary to ensure safe operating conditions.

Roads, gathering lines and electrical distribution lines will occupy common disturbance corridors where possible. Where available, roadways will be used as the staging area and working space for installation of gathering lines. All disturbances located in the same corridor will overlap each other to the maximum extent possible, while maintaining safe and sound construction and installation practices. Unless otherwise approved or requested in site specific documents, in no case will the maximum disturbance widths of the access road and utility corridors exceed the widths specified in Part D of this document.

Please refer to Topo B, for existing roads.

No segments require a ROW.

#### B. New or Reconstructed Access Roads:

All new or reconstructed roads will be located, designed, and maintained to meet the standards of the BLM. BMPs. Described in the BLM's Surface Operating Standards for Oil and Gas Exploration and Development, 4th Edition (Gold Book) (USDI and USDA, 2007) and/or BLM Manual Section 9113 (1985) will be considered in consultation with the BLM in the design, construction, improvement and maintenance of all new or reconstructed roads. If a new road would cross a water of the United States, Kerr-McGee will adhere to the requirements of applicable Nationwide Permits of the Department of Army Corps of Engineers.

Well pad or pad expansion may require construction of a new access road and/or de-commissioning of an older road. Plans, routes, and distances for new roads and road improvements are provided in design packages, exhibits and maps for a project. Project-specific maps are submitted to depict the locations of existing, proposed, and/or decommissioned and include the locations for supporting structures, including, but not limited to, culverts, bridges, low water crossings, range infrastructure, and haul routes, as per OSO 1. Designs for cuts and fills, including spoils source and storage areas, are provided with the road designs, as necessary.

As applicable, Kerr-McGee may use unimproved and/or two-track roads for lease operations, to lessen total disturbance.

Road designs will be based on the road safety requirements, traffic characteristics, environmental conditions, and the vehicles the road is intended to carry. Generally, newly constructed unpaved lease roads will be crowned and ditched with the running surfaces of the roads approximately 12-18 feet wide and a total road-utility corridor width not to exceed 45 feet, except where noted in the road design for a specific project. Maximum grade will generally not exceed 8%. Borrow ditches will be back sloped 3:1 or less. Construction BMPs will be employed to control onsite and offsite erosion.

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 3 of 11

Where topography would direct storm water runoff to an access road or well pad, drainage ditches or other common drainage control facilities, such as V- or wing-ditches, will be constructed to divert surface water runoff. Drainage features, including culverts, will be constructed or installed prior to commencing other operations, including drilling or facilities placement. Riprap will be placed at the inlet and outlet at the culvert(s) adjacent to the well pad, as necessary.

Prior to construction, new access road(s) will be staked according to the requirements of OSO 1. Construction activity will not be conducted using frozen or saturated materials or during periods when significant watershed damage (e.g. rutting, extensive sheet soil erosion, formation of rills/gullies, etc.) is likely to occur. Vegetative debris will not be placed in or under fill embankments.

New road maintenance will include, but is not limited to, blading, ditching, culvert installation and cleanout, gravel surfacing where excessive rutting or erosion may occur and dust control, as necessary to ensure safe operating conditions. All vehicular traffic, personnel movement, construction/restoration operations will be confined to the approved area and to existing roadways and/or access routes.

Snow removal will be conducted on an as-needed basis to accommodate safe travel. Snow removal will occur as necessary throughout the year, as will necessary drainage ditch construction. Removed snow may be stored on permitted well pads to reduce hauling distances and/or at the aerial extent of approved disturbance boundaries to facilitate snow removal for the remainder of the season.

If a county road crossing or encroachment permit is needed, it will be obtained prior to construction.

There are no new roads to be constructed.

#### C. Location of Existing Wells:

A) Refer to Topo Map C.

#### D. Location of Existing and/or Proposed Facilities:

This pad will expand the existing pad for the NBU 78, which is a producing gas well according to Utah Division of Oil, Gas and Mining (UDOGM) records on June 2, 2011. Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr McGee Oil and Gas Onshore LP (Kerr-McGee).

Should the well(s) prove productive, production facilities will be installed on the disturbed portion of each well pad. A bern will be constructed completely around production components that contain fluids (i.e. production tanks, produced liquids tanks, but typically excluding dehy's and/or separators). The berms will generally be constructed of compacted subsoil or corrugated metal, and will hold the capacity of the largest tank and have sufficient freeboard to accommodate a 25 year rainfall event, and be independent of the back cut. This includes pumping units. Aboveground structures constructed or installed onsite for 6 months or longer will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with the BLM (typically Shadow Gray). A production facility layout is provided as part of a project-specific APD, ROW or NOS submission.

#### **GAS GATHERING**

Please refer to Exhibit A and Topo D- Pad and Pipeline Detail.

The gas gathering pipeline material: Steel line pipe. Surface = Bare pipe. Buried = Coated with fusion bonded epoxy coating (or equivalent). The total gas gathering pipeline distance from the meter to the tie in point is  $\pm 995$ ' and the individual segments are broken up as follows:

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 4 of 11

#### The following segments are "onlease", no ROW needed.

 $\pm530^{\circ}$  (0.10 miles) – Section 30 T09S R22E (NW/4 NW/4) – On-lease UTU0463, BLM surface, New 8" buried gas gathering pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±465' (0.09 miles) – Section 30 T09S R22E (NW/4 NW/4) – On-lease UTU0463, BLM surface, New 8" buried gas gathering pipeline from the edge of the pad to the West Line of Section 30.

Please refer to Exhibit A. Line 18.

# LIQUID GATHERING

Please refer to Exhibit B and Topo D- Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 995$ ' and the individual segments are broken up as follows:

#### The following segments are "onlease", no ROW needed.

±530' (0.10 miles) – Section 30 T09S R22E (NW/4 NW/4 – On-lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.

±465' (0.09 miles) – Section 30 T09S R22E (NW/4 NW/4 – Lease UTU0463, BLM surface, New 6" buried liquid gathering pipeline from the edge of the pad to the West Line of Section 30. Please refer to Exhibit B, Line 21.

#### **Pipeline Gathering Construction**

Gathering (pipeline) infrastructure will be utilized to collect and transport gas and fluids from the wells which are owned and operated by Kerr-McGee. Gas gathering pipeline(s,) gas lift, or liquids pipelines may be constructed to lie on the surface or be buried. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. The area of disturbance during construction from the edge of road or well pad will typically be 30' in width. Where pipelines run cross country, the width of disturbance will typically be 45' for buried lines and 30' for surface lines. In addition, Kerr-McGee requests for a permanent 30' distrubance width that will be maintained for the portion adjacent to the road. The need for the 30' permanent distrubance width also are required to be 30'.

Above-ground installation will generally not require clearing of vegetation or blading of the surface, except where safety considerations necessitate earthwork. In some surface pipeline installation instances pipe cannot be constructed where it will lay. In these cases where an above-ground pipeline is constructed parallel and adjacent to a road, it will be welded/fused on the road and then lifted from the road to the pipeline route. In other cases where a pipeline route is not parallel and adjacent to a road (cross-country between sites), it will be welded/fused in place at a well pad, access road, or designated work area and pulled between connection locations with a suitable piece of equipment.

Buried pipelines will generally be installed parallel and adjacent to existing and/or newly constructed roads and within the permitted disturbance corridor. Buried pipelines may vary from 2 inches (typically fuel gas lines) to 24 inches (typically transportation lines) in diameter, but 6 to 16 inches is typical for a buried gas line. The diameter of liquids pipelines may vary from 2 inches to 12 inches, but 6 inches is the typical diameter. Gas lift lines may vary from 2 to 12 inches in diameter, but 6-inch diameter pipes are generally used for gas lift. If all three lines are present (gas gathering, gas lift, and fluids), they will share a common trench where possible.

Typically, to install a buried pipeline, topsoil will be removed, windrowed and placed on the non-working side of the route for later reclamation. Because working room is limited, the spoil may be spread out across the working side and construction will take place on the spoil. The working side of the corridor will be used for pipe stringing, bending, welding and equipment travel. Small areas on the working side displaying ruts or uneven ground will be groomed to facilitate the safe passage of equipment. After the pipelines are installed, spoil will be placed back into the trench, and the topsoil will be redistributed over the disturbed corridor prior to final reclamation. Typical depth of the trench will be 6 feet, but depths may vary according to site-specific conditions (presence of bedrock, etc.). The proposed trench width for the pipeline would range from 18-48 inches.

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NBU 922-30D Pad Surface Use Plan of Operations 5 of 11

The pipeline will be welded along the proposed route and lowered into place. Trenching equipment will cut through the soil or into the bedrock and create good backfill, eliminating the need to remove large rocks. The proposed buried pipeline will be visually and radiographically inspected and the entire pipeline will be pneumatically or hydrostatically tested before being placed into service. Routine vehicle traffic will be prevented from using pipeline routes as travel ways by posting signs at the route's intersection with an access road.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

If pipelines or roads encounter a drainage that could be subject to flooding or surface water during extreme precipitation events, Kerr-McGee will apply all applicable Army Corps mandates as well as the BLM's Hydraulic Considerations for Pipeline Crossings of Stream Channels (BLM Technical Note 423, April 2007). In addition, all stream and drainage crossings will be evaluated to determine the need for stream alteration permits from the State of Utah Division of Water Rights and if necessary, required permits will be secured. Similarly, where a road or pipeline crossing exists the pipe will be butt welded and buried to a depth between 24 and 48 inches or more. Dirt roads will be cut and restored to a condition equivalent to the existing condition. All Uintah County road encroachment and crossing permits, where applicable, will be obtained prior to crossing construction. In no case will pressure testing of pipelines result in discharge of liquids to the surface. Please see site specific PODs and/or mapping materials for location of related facilities such as cathodic protection wells or pumping stations. Pipeline signs will be installed along the route to indicate the pipeline proximity, ownership, and to provide emergency contact phone numbers. Above ground valves, lateral T's, and/or cathodic protection wells will be installed at various locations for production integrity and safety purposes.

Upon completion of the proposed buried pipeline, the entire area of disturbance will be reclaimed to the standards proposed in the Green River District Reclamation Guidelines. Please refer to section J for more details regarding final reclamation.

When no longer deemed necessary by the operator, Kerr-McGee or it's successor will consult with the BLM, Vernal Field Office before terminating of the use of the pipeline(s).

## $\label{thm:completions} The \ An adarko \ Completions \ Transportation \ System \ (ACTS) \ information:$

Please refer to Exhibit C for ACTs Lines

Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize the pit on this the proposed location as an Anadarko Completion Transport System (ACTS) staging pit which will be utilized for other completion operations in the area. The ACTS process will reduce the amount of truck traffic on a field-wide basis, also reducing vehicle emissions and fugitive dust generation.

Kerr-McGee will use ACTS to optimize the completion processes for multiple pads across the project area which may include up to a section of development. ACTS will facilitate management of frac fluids by utilizing existing reserve pits and temporary, surface-laid aluminum liquids transfer lines between frac locations. The pit will be refurbished as follows: mix and pile up drill cuttings with dry dirt, bury the original liner in the pit, walk bottom of pit with cat. Kerr-McGee will reline the pit with a 30 mil liner and double felt padding. The refurbished pit will be the same size or smaller as specified in the originally approved ROW/APD. The pit refurb will be done in a normal procedure and there will be no modification to the pit. Hog fence panels (5'  $\times$  16') will be built and painted shadow gray and will be put up on the work side of the pit. Polypropylene netting will be installed over all pits.

The collected hydrocarbons will be treated and sold at approved sales facilities. A loading rack with drip containment will be also be installed where water trucks would unload and load to prevent damage caused from pulling hoses in and out of the pit.

ACTS will require temporarily laying multiple 6" aluminum pipe water transfer lines on the surface between either existing or refurbished reserve pits. Please see the attached ACTS exhibit C for placement of the proposed temporary lines. The temporary aluminum transfer lines will be utilized to transport frac fluid being injected and/or recovered during the

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 6 of 11

completion process and will be laid adjacent to existing access roads or pipeline corridors. Upon completion of the frac operation, the liquids transfer lines will be flushed with fresh water and purged with compressed air. The contents of the transfer lines will be flushed into a water truck for delivery to another ACTS location or a reserve pit.

The volume of frac fluid transported through a water transfer line will vary, but volume is projected to be approximately 1.75 bbls per 50-foot joint. Although the maximum working pressure is 125 psig, the liquids transfer lines will be operated at a pressure of approximately 30 to 40 psig. Kerr-McGee requests to keep the netted pit open for one year from first production. During this time the surrounding well location completion fluids may be recycled in this pit and utilized for other frac jobs in the area. After one year Kerr-McGee will backfill the pit and reclaim. Kerr-McGee understands that due to the temporary nature of this system BLM considers this a casual use situation; therefore, no permanent ROW or temporary use plan will need to be issued by the BLM.

#### E. Location and Types of Water Supply:

Water for drilling and completion operations will be obtained from the following sources:

Permit # 49-2307	JD Field Services	Green River- Section 15, T2N, R22E
Permit # 49-2321	R.N. Industries	White River- Section 2, T10S, R24E
Permit # 49-2319	R.N. Industries	White River- Various Sources
Permit # 49-2320	R.N. Industries	Green River- Section 33, T8S, R23E

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### F. Construction Materials:

Construction operations will typically be completed with native materials found on location. Construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source (described in site-specific documents). No construction materials will be removed from federal lands without prior approval from the BLM. A source location other than an on-location construction site will be designated either via a map or narrative within the project specific materials provided to the BLM.

## G. Methods for Handling Waste:

All wastes subject to regulation will be handled in compliance with applicable laws to minimize the potential for leaks or spills to the environment. Kerr-McGee also maintains a Spill Control and Countermeasure Plan, which includes notification requirements, including the BLM, for all reportable spills of oil, produced liquids, and hazardous materials.

Any accidental release, such as a leak or spill in excess of the reportable quantity, as established by 40 CFR Part 117.3, will be reported as per the requirements of CERCLA, Section 102 B. If a release involves petroleum hydrocarbons or produced liquids, Kerr-McGee will comply with the notification requirements of NTL-3A. Drill cuttings and/or drilling fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon closure. Unless specifically approved by the BLM, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface precipitation runoff into the pit (via appropriate placement of subsoil/topsoil storage areas and/or construction of berms, ditches, etc). Should unexpected liquid petroleum hydrocarbons (crude oil or condensate) be encountered during drilling, completions or well testing, liquid petroleum hydrocarbons will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless approved by the BLM. Should timely removal not be feasible, the pit will be netted as soon as practical. Similarly, hydrocarbon removal will take place prior to the closure of the pit, unless authorization is provided for disposal via alternate pit closure methods (e.g. solidification).

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

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The reserve and/or fracture stimulation pit will be lined with an impermeable liner. The liner will be a synthetic material 30 mil or thicker. The bottom and side walls of the pit will be void of any sharp rocks that could puncture the liner. The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. After evaporation and when dry, the reserve pit liners will be cut off, ripped and/or folded back (as safety considerations allow) as near to the mud surface as possible and buried on location or hauled to a landfill prior to backfilling the pit with a minimum of five feet of soil material.

Where necessary and if conditions (freeboard, etc.) allow, produced liquids from newly completed wells may be temporarily disposed of into pits for a period not to exceed 90 days as per Onshore Order Number 7 (OSO 7). Subsequently, permanent approved produced water disposal methods will be employed in accordance with OSO 7 and/or as described in a Water Management Plan (WMP). Otherwise, fluids disposal locations and associated haul routes, for ROW consideration, are typically depicted on Topo A of individual projects. Revisions to the water source or method of transportation will be subject to written approval from the BLM.

Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse (trash and other solid waste including cans, paper, cable, etc.) generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility. Immediately after removal of the drilling rig, all debris and other waste materials not contained within trash receptacles will be collected and removed from the well location.

For the protection of livestock and wildlife, all open pits (excluding flare pits) will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet. Siphons, catchments, and absorbent pads will be installed to keep hydrocarbons produced by the drilling rig or other equipment on location from entering the reserve pit. Hydrocarbons, contaminated pads, and/or soils will be disposed of in accordance with state and federal requirements.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

# **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Hazardous materials may be contained in some grease or lubricants, solvents, acids, paint, and herbicides, among others as defined above. Kerr-McGee maintains a file, per 29 CFR 1910.1200 (g), containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances that are used during the course of construction, drilling, completion, and production operations for this project. The transport, use, storage and handling of hazardous materials will follow procedures specified by federal and state regulations. Transportation of hazardous materials to the well location is regulated by the Department of Transportation (DOT) under 49 CFR, Parts 171-180. DOT regulations pertain to the packing, container handling, labeling, vehicle placarding, and other safety aspects.

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 8 of 11

Potentially hazardous materials used in the development or operation of wells will be kept in limited quantities on well sites and at the production facilities for short periods of time. Chemicals meeting the criteria for being an acutely hazardous material/substance, or meet the quantities criteria per BLM Instruction Memorandum No. 93-344, will not be used.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

Fluids disposal and pipeline/haul routes are depicted on Topo Map A.

Any produced water separated from recoverable condensate from the proposed well will be contained in a water tank and will then be transported by pipeline and/or truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Or to one of the following Kerr-McGee active Salt Water Disposal (SWD) wells:

NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 34 T9S R21E

#### H. Ancillary Facilities:

No additional ancillary facilities are planned for this location.

## I. Well Site Layout:

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

For the protection of livestock and wildlife, all open pits and cellars will be fenced to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Each well will utilize either a centralized tank battery, centralized fluids management system, or have tanks installed on its pad. Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of BLM.

Where produced liquids tanks are utilized, the tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids. The tanks will be fenced or capped to prevent livestock or wildlife entry. The tanks will be kept reasonably free from surface accumulations of liquid hydrocarbons. The tanks are not to be used for disposal of liquids from additional sources without the prior approval of the BLM.

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

NBU 922-30D Pad Surface Use Plan of Operations 9 of 11

#### J. Plans for Surface Reclamation:

The surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. Interim reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### **Interim Reclamation**

Interim reclamation may include pit evaporation, fluid removal, pit solidification, re-contouring, ripping, spreading top soil, seeding, and/or weed control. Interim reclamation will be performed in accordance with OSO 1, or written notification will be provided to the BLM for approval. Where feasible, drilling locations, reserve pits, or access routes not utilized for production operations will be re-contoured to a natural appearance.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit. Disposal of pit fluids and linings is discussed in Section G.

#### **Final Reclamation**

Final reclamation will be performed for unproductive wells and after the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by Kerr-McGee. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. The BLM will be notified prior to commencement of reclamation operations. A Notice of Intent to Abandon will be filed for final recommendations regarding surface

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring the site to the approximate contour that existed prior to pad construction, final grading will be conducted over the entire surface of the well site and access road. The area will be ripped to a depth of 18 to 24" on 18 to 24" centers, where practical. The surface soil material will be pitted with small depressions to form longitudinal depressions 12 to 18"deep, where practical. The entire area will be uniformly covered with the depressions constructed perpendicular to the natural flow of water.

Reclamation of roads will be performed at the discretion of the BLM. All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded in accordance with the seeding specifications of the BLM.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to the BLM.

#### Measures Common to Interim and Final Reclamation

Soil preparation will be conducted using a disk for areas in need of more soil preparation following site preparation. This will provide primary soil tillage to a depth no greater than 6 inches. Prior to reseeding, compacted areas will be scarified by ripping or chiseling to loosen compacted soils, promote water infiltration, and improve soil aeration and root penetration.

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

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Seeding will occur year-round as conditions allow and will typically be accomplished through the use of a no-till rangeland style seed drill with a "picker box" in order to seed "fluffy" seed. Where drill seeding is not the preferred method, seed will be broadcast and then raked into the ground at double the rate of drill seeding. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The seed mixes will be selected from a list provided by or approved by the BLM, or a specific seed mix will be proposed by Kerr-McGee to the BLM and used after its approval. The selected specific seed mix for each well location and road segment will be utilized while performing interim and final reclamation for each project. All seed will be certified and tags will be maintained by Kerr-McGee. Every effort will be made to obtain "cheat grass free seed".

Seed Mix to be used for Well Site, Access Road, and Pipeline (as applicable):

Shadescale Mix	e Live Seed lbs/acre
Indian Ricegrass (Nezpar)	3
Sandberg bluegrass	0.75
Bottlebrush squirreltail	1
Great Basin Wildrye	0.5
Crested wheatgrass (Ephraim)	1.5
Winterfat	0.25
Shadscale	1.5
Four-wing saltbush	0.75
Forage Kochia	0.25
Total	9.5

Additional soil amendments and/or stabilization may be required on sites with poor soils and/or excessive erosion potential. Where severe erosion can become a problem and/or the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. Slopes will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to: erosion control blankets, hydro-mulch, and/or bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage. Soil amendments such as "Sustain" (an organic fertilizer that will be applied at the rate 1,800-2,100 lbs/acre with seed) may also be dry broadcast or applied with hydro-seeding equipment.

#### Weed Control

All weed management will be done in accordance with the Vernal BLM Surface Disturbance Weed Policy. Noxious weeds will be controlled, as applicable, on project areas. Monitoring and management of noxious and/or invasive weeds of concern will be completed annually until the project is deemed successfully reclaimed by the surface management agency and/or owner according to the Anadarko Integrated Weed Management Plan. Noxious weed infestations will be mapped using a GPS unit and submitted to the BLM with information required in the Vernal BLM Surface Disturbance Weed Policy. If herbicide is to be applied it will be done according to an approved Pesticide Use Permit (PUP), inclusive of applicable locations. All pesticide applications will be recorded using a Pesticide Application Record (PAR) and will be submitted along with a Pesticide Use Report (PUR) annually prior to Dec. 31.

## Monitoring

Monitoring of reclaimed project areas will be completed annually during the growing season and actions to ensure reclamation success will be taken as needed. During the first two growing seasons an ocular methodology will be used to determine the success of the reclamation activities. During the 3rd growing season a 200 point line intercept (quantitative) methodology will be used to obtain basal cover. The goal is to have the reclaimed area reach 30% basal cover when compared to the reference site. If after three growing seasons the area has not reached 30% basal cover, additional reclamation activities may be necessary. Monitoring will continue until the reclaimed area reaches 75% basal cover of desirable vegetation when compared to the reference site. (Green River District Reclamation Guidelines)

All monitoring reports will be submitted electronically to the Vernal BLM in the form of a geo-database no later than March 31, of the calendar year following the data collection.

#### K. Surface/Mineral Ownership:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

NBU 922-30C3S / 922-30D1BS / 922-30D1CS / 922-30D3AS / 922-30D3DS / 922-30E2AS / 922-30F1BS Kerr-McGee OII Gas Onshore, L.P.

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#### L. Other Information:

#### **Onsite Specifics:**

- · Construction: 30 Mil Double Felt
- Existing surface gas gathering pipeline will be removed from location if no longer in service

#### **Cultural and Paleontological Resources**

All personnel are strictly prohibited from collecting artifacts, any paleontological specimens or fossils, and from disturbing any significant cultural resources in the area. If artifacts, fossils, or any culturally sensitive materials are exposed or identified in the area of construction, all construction operations that would affect the newly discovered resource will cease, and Kerr-McGee will provide immediate notification to the BLM.

#### **Resource Reports:**

A Class I literature survey was completed on February 11, 2011, by Montgomery Archaeological Consultants, Inc (MOAC). For additional details please refer to report MOAC 10-243b.

A paleontological reconnaissance survey was completed on February 02, 2011, by Intermountain Paleo-Consulting. For additional details please refer to report IPC #10-31.

Biological field survey was completed on June 22, 2010, by Grasslands Consulting, Inc (GCI). For additional details please refer to report GCI-396.

#### M. Lessee's or Operators' Representative & Certification:

Laura Abrams
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6356

Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filling of false statements.

	June 2, 2011
Laura Abrams	Date

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9
	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463		
SUNDRY NOTICES AND REPORTS ON WELLS			6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 922-30C3S		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047506440000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHONE N treet, Suite 600, Denver, CO, 80217 3779	<b>IUMBER:</b> 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 30	IP, RANGE, MERIDIAN: 0 Township: 09.0S Range: 22.0E Meridian: S		STATE: UTAH
11. CHE	CK APPROPRIATE BOXES TO INDICATE N	IATURE OF NOTICE, REPORT	, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
Kerr-McGee Oil & G extension to this A	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF	espectfully requests an ed. Please contact the nents. Thank you.	
NAME (PLEASE PRINT) Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 7/12/2011	



# The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

# Request for Permit Extension Validation Well Number 43047506440000

**API:** 43047506440000 **Well Name:** NBU 922-30C3S

Location: 1253 FNL 0663 FWL QTR NWNW SEC 30 TWNP 090S RNG 220E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued: 8/31/2009** 

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

<ul> <li>If located on private land, has the ownership changed, if so, has the surface agreement been updated?  Yes No</li> </ul>
<ul> <li>Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?</li> <li>Yes</li> <li>No</li> </ul>
<ul> <li>Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?</li> <li>Yes</li> <li>No</li> </ul>
<ul> <li>Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?</li> <li>Yes</li> <li>No</li> </ul>
• Has the approved source of water for drilling changed?   Yes  No
<ul> <li>Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul>
• Is bonding still in place, which covers this proposed well?   Yes   No

**Signature:** Gina Becker **Date:** 7/12/2011

**Title:** Regulatory Analyst II **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Form 3160-3 \* (August, 2007)

# RECEIVED BY UNITED STATES



FORM APPROVED OMB NO. 1004-0137

**UTU463** 

7. If Unit or CA Agreement, Name and No.

AUGDE 5 A2809 MENT OF THE INTERIOR 28 2011

BUREAU OF LAND MANAGEMENT

APPLICATION OF PERMIT TO BRILL OR REENTER

LICATION OF LAND MANAGEMENT

Expires: July 31, 2010

6. If Indian, Allottee or Tribe Name

5. Lease Serial No.

1a. Type of Work: LXI DRILL	REEN	TER		L	UTU630	)47A	
					<ol><li>Lease Na</li></ol>	me and Well No	
1b. Type of Well: Oil Well X Gas Well Other	er	Single Zone	X Multipl	le Zone	NBU 92	2-30C3S	
2. Name of Operator					9. API Well	No.	
KERR-MCGEE OIL & GAS	ONSH	ORELP				43-047-506	44
3a. Address		<del></del>	ude area code)		0 Field and	Pool, or Explora	*****
P.O. BOX 173779	30.11		•	1	io. Piciu and	rooi, or explore	шогу
DENVER, CO 80202-3779	İ	Andy Lytle	720-929	-6100		NATURAL BU	TTES
4. Location of well (Report location clearly and In accordance w	vith any Si	tate requirem	ents.*)	1	1. Sec.,T.,R	Mor Blk.and	Survey or Area
At surface NWNW Lot 1 1253 FNL FWL Lat		0.010807	•	.4883	, ,	, ,	
At proposed prod. zone SENW 1381 198 FNL FW	l ot	40.010481	Long109.	48358	30	T 9S R	22E
14. Distance in miles and direction from the nearest town or post o				1	2. County o	r Parish	13. State
Approximately 23 Miles Southeast	of Ourav	. Utah	•		•	NTAH	UTAH
15. Distance from proposed*	, , , , , , , , , , , , , , , , , , , ,			1.5 0			<u> </u>
location to nearest		16. No. of a	cres in lease	17. Spac	ing Unit ded	icated to this wel	1
property or lease line, ft.			551				
(Also to nearest drlg. unit line, if any)							
18. Distance from proposed location*		19. Propose	d Depth	20. BLM	I/ BIA Bond	No on file	
to nearest well, drilling, completed, 528'		1 -	•		Dar Dong	ivo. on the	
applied for, on this lease, ft.		,	,766'	i		WYB000291	
21. Elevations (Show whether DF. RT, GR, etc.)		22. Aproxin	nate date work wi	ill start*	23. Estir	nated duration	
4925' GR			12/1/2011			60-90 Da	
	24	I. Attachment			L	00-90 Da	iys
The following, completed in accordance with the requirements of C			_	a attachad	4- 4l-:- C		
of the second se	71132101C O	n and Gas Of	dei No. I shah be	e anacheu	to this form:		
1. Well plat certified by a registered surveyor.		1 4.	Bond to cover f	he oneratio	nns unless co	wered by evicting	g bond on file(see
2. A Drilling Plan.			item 20 above).		0113 d111033 CC	voice by existing	g bond on me(see
3. A Surface Use Plan ( if the location is on National Forest Syste	m Lands,	the 5.	Operator certific				
SUPO shall be filed with the appropriate Forest Service Office)			-		formation an	d/ or plans as ma	y be required by the
			authorized offic			or promo do me	is to required by the
25. Signature	Name /	Printed/ Type	ed)			Date	
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- /	••••	Andy L	vtle	Date	6/27/2011
Title					,		U.D. I.D. I.
Regulatory Analyst I							
Approved By (Signature)	Name (	Printed/Type	ry Kencz	1	1	Date	7 0 6 0044
- Ju French		Jer	ry Kencz	ка		l OC	T 0 3 2011
Title Assistant Field Manager Lands & Mineral Resources	Office	VER	NAL FIELD	OFFIC	E		
Application approval does not warrant or certify that the applicant he	olds legal	or equitable	title to those righ	its in the	subject lease	which would en	title the applicant to
conduct operations thereon.  Conditions of approval, if any, are attached.	IS C	OF A	PPRO	VAL	. ATT	ACHE	D applicant to
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make	it a crime	for any nero	on knowingly and			1	
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make States any false, fictitious or fraudulent statements or representations as to ar	nv matter v	vithin its inried	ction	wanting to	"RECE	IVED <sup>nt or a</sup>	agency of the United



(Continued on page 2)

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



# UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT** VERNAL FIELD OFFICE 170 South 500 East

**VERNAL, UT 84078** 

(435) 781-440(



# CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	Kerr McGee Oil & Gas Onshore, LP	Location:	Lot 1, Sec. 30, T9S, R22E (S) SENW, Sec. 30, T9S, R22E (B)
Well No:	NBU 922-30C3S	Lease No:	UTU-463
API No:	43-047-50644	Agreement:	Natural Buttes Unit

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER: (435) 781-3420** 

# A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

# **NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	. <b>-</b>	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)		Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: <u>ut_vn_opreport@blm.gov</u> .
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	· •	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)		Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

# SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- All new and replacement internal combustion gas field engines of less than or equal to 300 designrated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.
- All and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.
- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

## SITE SPECIFIC COAS

- Kerr McGee will adhere to all applicant committed conservation measures and conservation recommendations that are stated in the USFWS's "Final Biological Opinion for the Anadarko Petroleum Corporation Natural Buttes Unit and Bonanza Area Natural Gas Development Project.
- The operator will follow the Green River District Reclamation Guidelines for Reclamation.
- The operator will control noxious weeds along the well pad, access road, and the pipeline route by spraying or mechanical removal. On BLM administered land, a Pesticides Use Proposal (PUP) will be submitted and approved prior to the application of herbicides or pesticides or possibly hazardous chemicals.

# DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

# SITE SPECIFIC DOWNHOLE COAs:

• A copy of Kerr McGee's Standard Operating Practices (SOP version: dated 7/17/08 and approved 7/28/08) shall be on location.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

# DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily
  drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order
  No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a
  test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be reported in the driller's
  log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.

Page 4 of 6 Well: NBU 922-30C3S 9/19/2011

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the <u>top of cement</u> and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: NBU 922-30C3S 9/19/2011

# **OPERATING REQUIREMENT REMINDERS:**

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at <a href="https://www.ONRR.gov">www.ONRR.gov</a>.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - o Well location (1/41/4, Sec., Twn, Rng, and P.M.).
  - O Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

Page 6 of 6 Well: NBU 922-30C3S 9/19/2011

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office
  Petroleum Engineers will be provided with a date and time for the initial meter calibration and all
  future meter proving schedules. A copy of the meter calibration reports shall be submitted to the
  BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid
  hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be
  identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior approval of
  the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior
  approval of the BLM Vernal Field Office shall be obtained and notification given before resumption
  of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

# BLM - Vernal Field Office - Notification Form

Subr Well Qtr/ Leas	rator KERR-MCGEE OIL & GA mitted By SHEILA WOPSOCH Name/Number NBU 922-300 Qtr NWNW Section 30 See Serial Number UTU-463	Phone Nur	nber <u>435.</u>	
	Number <u>4304750644</u>		· · · · · · · · · · · · · · · · · · ·	
-	<u>d Notice</u> – Spud is the initial below a casing string.	spudding o	of the we	ll, not drilling
	Date/Time <u>12/20/2011</u>	1700 HRS	AM 🗸	РМ
Casin time ✓	Surface Casing Intermediate Casing Production Casing Liner Other		DIV. OF	ECEIVED DEC 1 5 2011 FOIL GAS & MINING
BOP	Date/Time 01/24/2011  E Initial BOPE test at surface BOPE test at intermediate 30 day BOPE test Other		nt	PIVI
	Date/Time		AM 🗌	РМ
Rem	arks ESTIMATED DATE AND LOVEL YOUNG AT 435.7	TIME. PLEA <del>781.7051 FO</del>	SE CONT <del>R MORE</del>	TACT

	FORM 9				
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463		
SUNDE	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
Do not use this form for proposition-hole depth, reenter plu DRILL form for such proposals.	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES				
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047506440000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHC treet, Suite 600, Denver, CO, 80217 3779	720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 30	(P, RANGE, MERIDIAN: O Township: 09.0S Range: 22.0E Meridian	: S	STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	☐ ACIDIZE	☐ ALTER CASING	CASING REPAIR		
☐ NOTICE OF INTENT	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME		
Approximate date work will start:	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION		
Dute of Work completion.	OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK		
✓ SPUD REPORT	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud: 12/22/2011	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
12/22/2011	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL		
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION		
Report Date.	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
12 DECEDINE DODOCED OF CO			<u></u>		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.  RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON  12/22/2011 AT 1000 HRS.					
NAME (PLEASE PRINT) Sheila Wopsock	<b>PHONE NUMBER</b> 435 781-7024	TITLE Regulatory Analyst			
SIGNATURE N/A		<b>DATE</b> 12/22/2011			

# STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM					
Operator:	KERR McGEE OIL & GAS ONSH	ORE LP	Operator Account Number:	N 2995	
Address:	1368 SOUTH 1200 EAST				
	city VERNAL				
		ip 84078	Phone Number:	(435) 781-7024	

API Number	Well	Name	QQ	QQ Sec Twp		Rng County		
4304750644	NBU 922-30C3S		NWNW	NWNW 30 9S			22E UINTAH	
Action Code	Current Entity Number	New Entity Number	s	Spud Date		Entity Assignmen Effective Date		
$\mathcal{B}$	99999	2900	1:	12/22/2011			128/11	
Comments: MIRI	U PETE MARTIN BUCH D WELL ON 12/22/201	KETRIG. WSM	VD BH	L= 1	1ENU	<u></u>		

API Number	Number Well Name		QQ	QQ Sec Twp		Rng County		
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date			
comments:								

API Number	Pl Number Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
omments:			<u> </u>	· · · · · · · · · · · · · · · · · · ·			

A	CTION	CODES	•

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

SHEILA WOPSOCK

Signature REGULATORY ANALYST

12/22/2011

Title

(5/2000)

**RECEIVED** 

DEC 27 2011

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURC DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly or reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047506440000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 73779 720 929-0	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 30 Township: 09.0S Range: 22.0E Meri	dian: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT     Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
1/25/2012			
	WILDCAT WELL DETERMINATION	OTHER .	OTHER:
MIRU AIR RIG ON RAN SURFACE CAS	COMPLETED OPERATIONS. Clearly show a JAN. 22, 2012. DRILLED SUR SING AND CEMENTED. WELL IS OF CEMENT JOB WILL BE INCLED COMPLETION REPORT.	FACE HOLE TO 2770'. S WAITING ON ROTARY	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 25, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMB</b> 720 929-6304	ER TITLE Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 1/25/2012	
11//1		1/20/2012	

Sundry Number: 22290 API Well Number: 43047506440000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES		FORM 9
	DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463
SUNDF	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	oposals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		<b>9. API NUMBER:</b> 43047506440000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18t	PHC h Street, Suite 600, Denver, CO, 80217 377	ONE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 5MATURAL BUTTES
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QTR/QTR, SECTION, TOWNS	HIP, RANGE, MERIDIAN: 30 Township: 09.0S Range: 22.0E Meridian	: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT Approximate date work will start:  1/17/2012  SUBSEQUENT REPORT Date of Work Completion:  SPUD REPORT Date of Spud:  DRILLING REPORT Report Date:	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION	ALTER CASING CHANGE TUBING COMMINGLE PRODUCING FORMATIONS FRACTURE TREAT PLUG AND ABANDON RECLAMATION OF WELL SITE SIDETRACK TO REPAIR WELL VENT OR FLARE SI TA STATUS EXTENSION DTHER	CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER:
The Operator re Specifically, the C loop drilling option,	completed operations, clearly show all perequests approval for changes in operator requests approval for a and a production casing change oproved drilling plan will not character attachment. Thank you.	the drilling plan. FIT wavier, closed je. All other aspects	Accepted by the Utah Division of Oil, Gas and Mining  Date: February 02, 2012  By: Day Court
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE N/A		DATE 1/17/2012	

NBU 922-30C3S Drilling Program
1 of 7

# Kerr-McGee Oil & Gas Onshore. L.P.

NBU 922-30C3S

Surface: 1253 FNL / 663 FWL NWNW BHL: 1381 FNL / 1985 FWL SENW

Section 30 T9S R22E

Uintah County, Utah Mineral Lease: UTU-0463

## ONSHORE ORDER NO. 1

## **DRILLING PROGRAM**

# 1. & 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,449'	
Birds Nest	1,758'	Water
Mahogany	2,120'	Water
Wasatch	4,715'	Gas
Mesaverde	7,355'	Gas
MVU2	8,286'	Gas
MVL1	8,804'	Gas
TVD	9,579'	
TD	9,766'	

# 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program

# 4. <u>Proposed Casing & Cementing Program:</u>

Please refer to the attached Drilling Program

# 5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

# 6. <u>Evaluation Program</u>:

Please refer to the attached Drilling Program

NBU 922-30C3S Drilling Program
2 of 7

# 7. **Abnormal Conditions:**

Maximum anticipated bottom hole pressure calculated at 9579' TVD, approximately equals 6,131 psi 0.64 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,010 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

# 8. <u>Anticipated Starting Dates:</u>

Drilling is planned to commence immediately upon approval of this application.

## 9. <u>Variances:</u>

Please refer to the attached Drilling Program. Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- · Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

# **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

NBU 922-30C3S Drilling Program
3 of 7

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

# Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

# **Variance for Mud Material Requirements**

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

#### Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

NBU 922-30C3S Drilling Program
4 of 7

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

# Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

#### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

# 10. Other Information:

Please refer to the attached Drilling Program.

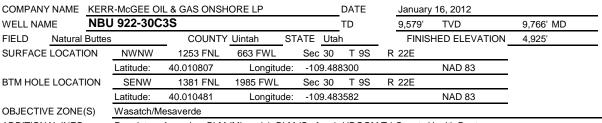
RECEIVED: Jan. 17, 2012

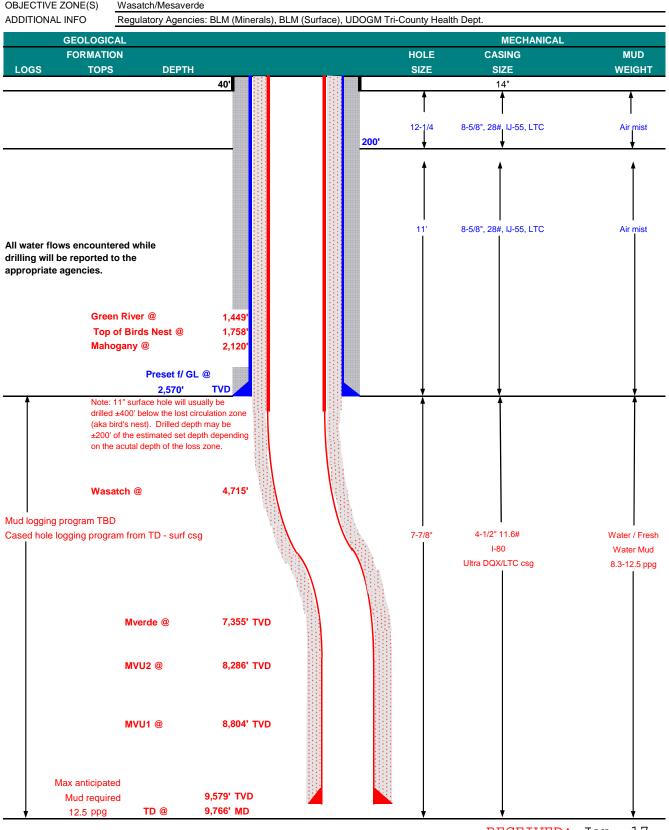
Drilling Program 5 of 7



NBU 922-30C3S

# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM





NBU 922-30C3S Drilling Program
6 of 7



# KERR-McGEE OIL & GAS ONSHORE LP

# **DRILLING PROGRAM**

CASING PROGRAM

CONDUCTOR

SURFACE PRODUCTION

									LTC	DQX
SIZE	INTE	RVAL		WT.	GR.	CPLG.	BURST COLLAPSE		APSE	TENSION
14"	0	-40'								
							3,390	1,880	348,000	N/A
8-5/8"	0	to	2,570	28.00	IJ-55	LTC	2.10	1.56	5.52	N/A
							7,780	6,350	223,000	267,035
4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.02		2.91
4-1/2"	5,000	to	9,766'	11.60	I-80	LTC	1.11	1.02	4.99	

**DESIGN FACTORS** 

**Surface Casing:** 

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	r YI	ELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1	.15
Option 1		+ 0.25 pps flocele					
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1	.15
		+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water t	o surface,	option 2 wil	l be utilized		
Option 2 LEAD	2,070'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00	3	3.82
		+ 0.25 pps Flocele + 3% salt BWOW					
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1	.15
		+ 0.25 pps flocele					
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1	.15
PRODUCTION LEAD	4,206'	Premium Lite II +0.25 pps	330	35%	12.00	3	3.38
		celloflake + 5 pps gilsonite + 10% gel					
		+ 0.5% extender					
TAIL	5,560'	50/50 Poz/G + 10% salt + 2% gel	1,310	35%	14.30	1	.31
		+ 0.1% R-3					

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

# **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe

PRODUCTION

Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

## **ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

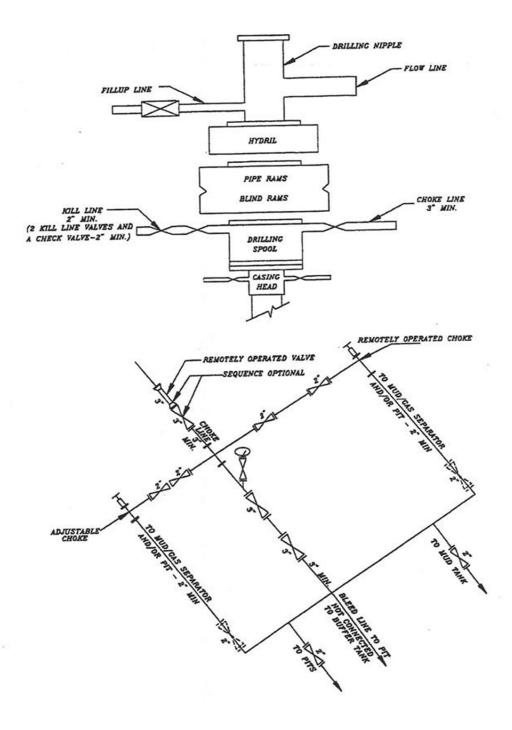
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Chad Loesel		
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young	-	

RECEIVED: Jan. 17, 2012

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A NBU 922-30C3S



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

# Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED: Jan. 17, 2012

# BLM - Vernal Field Office - Notification Form

Subi	rator <u>ANADARKO</u> Rig Name/# <u>ENSIGN 139</u> mitted By <u>KENNY MORRIS</u> Phone Number <u>435- 8</u> Name/Number <u>NBU922<del>-C3CS</del> </u>	28 - 0984
Leas	Qtr <u>NW/NW</u> Section <u>30</u> Township <u>9S</u> Range 23 se Serial Number <u>UTU463</u> Number 4304750644	2E_
	<u>d Notice</u> — Spud is the initial spudding of the well, n below a casing string.	ot drilling
	Date/Time AM D	м []
time	ng – Please report time casing run starts, not ceme es.  Surface Casing Intermediate Casing Production Casing Liner Other  Date/Time AM PM	RECEIVED  MAR 2 7 2012  DIV. OF OIL. GAS & MININGS
BOP		
	Date/Time 3/25/2012 12:00 AM PM	
Don	parks MILL BOD TEST 2/25/2012 ADOLIND NOON	AI

# BLM - Vernal Field Office - Notification Form

Ope	rator <u>ANADARKO                                    </u>	N 139	
	mitted By SID ARMSTRONG Phone Number	er <u>435</u> -	828-0984
Well	Name/Number <u>NBU 922- 30C3S</u>		
	Qtr <u>NW/NW</u> Section <u>30</u> Township	<u>9S</u> R	ange 22E
	se Serial Number <u>UTU 0463</u>		
API	Number 43-047-50644	<u> </u>	
	d Notice – Spud is the initial spudding of the below a casing string.	ne well	, not drilling
	Date/Time A	M 🗌	РМ
<u>Casi</u>	ng – Please report time casing run starts,	not cer	menting
	Surface Casing	ı	RECEIVED
	Intermediate Casing	•	MAR 2 8 2012
$\square$	Production Casing		MAR Z O ZUIZ
	Liner	₿W (	OF OIL GAS & MINING
	Other		
	Date/Time <u>3/31/2012</u> <u>01:00</u> A	AM 🖂	РМ
ВОР	E		
	Initial BOPE test at surface casing point		
	BOPE test at intermediate casing point		
	30 day BOPE test		
	Other		
	Date/Time AM PM	1	
		1	

# Remarks <u>WILL BE MOVING TO NBU 921 MAVERICK 26B - HZ & WILL BE TESTING B.O.P'S</u>

Sundry Number: 24307 API Well Number: 43047506440000

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	3	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463
SUNDR	Y NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	posals to drill new wells, significantly deep reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON			9. API NUMBER: 43047506440000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	PHC n Street, Suite 600, Denver, CO, 80217 377	ONE NUMBER: 79 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE:			COUNTY: UINTAH
1253 FNL 0663 FWL QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NWNW Section:	<b>HIP, RANGE, MERIDIAN:</b> 30 Township: 09.0S Range: 22.0E Meridian	: <b>S</b>	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
4/1/2012	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Nopon Suio.		OTHER	OTHER: Rig Release-ACTS Pit
			, <del></del>
MIRU ROTARY RI 11.6# I-80 PRODUC APRIL 1, 2012 @ 12:0 REPORT. WELL IS V	COMPLETED OPERATIONS. Clearly show all pe IG. FINISHED DRILLING FROM 3 TION CASING. CEMENTED PRO 10 HRS. DETAILS OF CEMENT JO WAITING ON FINAL COMPLETION REFURBISHED AND UTILIZED A	2,770' TO 9,540' ON M DUCTION CASING. RE B WILL BE INCLUDED N ACTIVITIES. THE PIT NS PART OF THE ACTS	MARCH 30, 2012. RAN 4-1/2" LEASED ENSIGN 139 RIG ON WITH THE WELL COMPLETION ON THIS LOCATION WILL BE
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	TITLE Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 4/2/2012	

Sundry Number: 27280 API Well Number: 43047506440000

	STATE OF UTAH		FORM 9
ι	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047506440000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 17 3779 720 929-	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 30 Township: 09.0S Range: 22.0E Me	ridian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
7/2/2012		OTHER	OTHER:
	WILDCAT WELL DETERMINATION	U OTHER	<u>'</u>
THE SUBJECT WELL 1:15 P.M. THE CHR	COMPLETED OPERATIONS, Clearly show L WAS PLACED ON PRODUC CONOLOGICAL WELL HISTOR TH THE WELL COMPLETION F	TION ON JULY 2, 2012 AT RY WILL BE SUBMITTED	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 02, 2012
NAME (PLEASE PRINT)	PHONE NUMI	BER TITLE	
Jaime Scharnowske	720 929-6304	Regulartory Analyst	
SIGNATURE N/A		<b>DATE</b> 7/2/2012	

RECEIVED: Jul. 02, 2012

Sundry Number: 27427 API Well Number: 43047506440000

	STATE OF UTAH				FORM 9
ι	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND M		3	5.LEASE UTU 0	DESIGNATION AND SERIAL NUMBER: 463
SUNDR	Y NOTICES AND REPORTS	ON	WELLS	6. IF IND	IAN, ALLOTTEE OR TRIBE NAME:
Do not use this form for pro current bottom-hole depth, I FOR PERMIT TO DRILL form	posals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.	y deep ontal l	en existing wells below aterals. Use APPLICATION		OF CA AGREEMENT NAME: AL BUTTES
1. TYPE OF WELL Gas Well					NAME and NUMBER: 22-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			<b>9. API NI</b> 43047	UMBER: 506440000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 802		NE NUMBER: 720 929-6		and POOL or WILDCAT:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL				COUNTY	
QTR/QTR, SECTION, TOWNSH	HP, RANGE, MERIDIAN: 30 Township: 09.0S Range: 22.0E Me	eridian:	: S	STATE: UTAH	
11. CHECK	K APPROPRIATE BOXES TO INDICA	ATE N	ATURE OF NOTICE, REPOR	RT, OR C	OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE		ALTER CASING		CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING		CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS		CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	F	RACTURE TREAT		NEW CONSTRUCTION
	OPERATOR CHANGE		PLUG AND ABANDON		PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE		RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL		TEMPORARY ABANDON
	TUBING REPAIR		/ENT OR FLARE		WATER DISPOSAL
✓ DRILLING REPORT					
Report Date: 7/6/2012	WATER SHUTOFF		SI TA STATUS EXTENSION		APD EXTENSION
	WILDCAT WELL DETERMINATION		OTHER	ОТН	ER:
	COMPLETED OPERATIONS. Clearly show	-		FOI	Accepted by the Utah Division of il, Gas and Mining R RECORD ONLY July 10, 2012
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUM</b> 720 929-6304	BER	TITLE Regulartory Analyst		
SIGNATURE N/A			<b>DATE</b> 7/6/2012		

Form 3160-4 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

	WELL C	OMPL	ETION C	RRE	COM	PLETIC	N RE	PORT	AND L	_OG		<b></b>		ease Serial ITU463	No.	
1a. Type of	_	Oil Well	☑ Gas V Iew Well	Vell D Worl	Dry	O		☐ Plug	Back	Пρ	iff Re	esvr	6. If	Indian, All	ottee or	r Tribe Name
o. Type o.	f Completion	Othe		- Woll			——————————————————————————————————————		, Dack	. تا	111, 100	7571.		nit or CA A TU63047		ent Name and No.
2. Name of KERR	Operator MCGEE OIL	. & GAS	ONSHORE	Mail: ca		ntact: CA hler@ana							8. Le N	ease Name IBU 922-3	and We	ell No.
3. Address	1099 18TH DENVER,		T, SUITE 1 202	800				Phone N 720-92	o. (include 9-6029	e area c	ode)		9. A	PI Well No	) <b>.</b>	43-047-50644
4. Location	of Well (Rep	ort locati	ion clearly an	d in acco	ordance	with Fede	ral requi	irements	)*				10. F	ield and P	ool, or l	Exploratory S
At surfa			NL 663FWL									ļ	11. S	Sec., T., R.,	M., or	Block and Survey 9S R22E Mer SLB
	rod interval r	•				976FWL	A Ar.					ľ	12. (	County or I		13. State
At total  14. Date St		NW 137	IFNL 1993F	te T.D. I			γν\ 	16 Date	Complet	ed					DF. KI	3, RT, GL)*
12/22/2	2011			30/2012				□ D & 07/0		Ready	to Pr	od.		49	25 GL	
18. Total D	epth:	MD TVD	9540 9330		19. Plu	ig Back T	.D.;	MD TVD	94	182 27 <b>3.7</b>	ŀ	20. Dep		dge Plug S		MD TVD
21. Type E CBL/GI	lectric & Oth R/COLLARS	er Mecha S-RCBL/0	nical Logs R GRCCL	ın (Subn	nit copy	of each)				22. V	Was w Was D Directi	ell cored ST run? ional Sur	? vey?	M No No No No	☐ Yes	s (Submit analysis) s (Submit analysis) s (Submit analysis)
23. Casing a	nd Liner Reco	ord (Repo	ort all strings	set in we	ell)											
Hole Size	Size/G	rade	Wt. (#/ft.)	Top (MD		Bottom (MD)		ementer pth		of Sks. of Cem		Slurry (BBl		Cement	Top*	Amount Pulled
20.000		000 STL	36.7		0	40					28				0	
11.000		25 IJ-55	28.0 11.6		0	2728 9527			<del> </del>		668 1542				392	
7.875	4.3	500 1-80	11.0			9321					1072					
	ļ <u>.</u>													<u> </u>		
24. Tubing	Pagard						L		I			<u> </u>		·		
	Depth Set (M	(D) P	acker Depth	(MD)	Size	Dept	h Set (M	D) I	acker De	pth (M	D)	Size	De	pth Set (M	(D)	Packer Depth (MD)
2.375		3936														
25. Produci	ng Intervals					26.	Perforat	ion Rec	ord		-			<del></del>	1 -	
	ormation		Тор		Botto		Pe	rforated		0.754	╁	Size		No. Holes	OPE	Perf. Status
<u>A)</u>	WASA			6262 7578		7513 9442			6262 T 7578 T			0.36	_		OPE	
B)	MESAVE	KDE		1316		7442			70701	0 347		0.00	Ĭ		, 0, 2	
D)																
	racture, Treat		ment Squeeze	Etc.						1.00	. C2 f					
	Depth Interva	<u>1</u> 62 TO 9	442 PUMP 1	1 814 BE	N S SI I	CK H2O 8	245 510		mount and			ateriai				<del></del>
	02	02 10 3	1421 0111	1,011.02												
											-					
28. Product	ion - Interval	A										······································				
Date First	Test	Hours	Test	Oil	Gas		Vater	Oil G			Gas		Product	ion Method		
Produced 07/02/2012	Date 07/07/2012	Tested 24	Production	BBL 0.0	МС 2	271.0	3BL 670.0	Corr.	API	ľ	Gravity			FLO	WS FR	OM WELL
Choke	Tbg. Press.	Csg.	24 Hr.	Oil	Gas		Water	Gas:C		7	Well Sta	atus				
Size 20/64	Flwg. 1548 SI	Press. 2291.0	Rate	BBL 0	MC	2271	3BL 670	Ratio			P	GW				
28a, Produc	tion - Interva	l B														
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MC		Water BBL	Oil G Corr.	ravity API		Gas Gravity		Product	ion Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MC		Water BBL	Gas:0 Ratio			Well St	atus				RECEIV

(See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #146635 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

AUG 2 8 2012

	luction - Interv		<del> </del>		1	1	lou o .	т	~	D. 4. 4. 35 0 1		
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API		Gas Gravity	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	1	Well Status			
28c. Prod	luction - Interv	ral D			<u> </u>		<u> </u>	ь		·		<del></del>
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API		Gas Gravity	Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well Status			
29. Dispo	osition of Gas	Sold, used	for fuel, vent	ed, etc.)	<u></u>			L				
	nary of Porous	Zones (In	clude Aquife	rs):				<del></del>	31. Fo	rmation (Log) Mar	kers	
tests,	all important including depter coveries.	zones of po th interval t	prosity and c tested, cushic	ontents ther on used, tim	eof: Cored e tool ope	d intervals and and and and and	all drill-stem shut-in pressu	ıres				
	Formation		Тор	Bottom		Description	ns, Contents, e	etc.		Name		Top
	1 Ollianon						,					Meas. Depth
The f surfa csg v	ce hole was	the surfac drilled with 5035 ft to	e hole was n an 11 in b 9527 ft. At	drilled with	a was run	in. bit. The ro from surface ological well h	to 5035 ft; L	тс	BI M/ W/	REEN RIVER RD'S NEST AHOGANY ASATCH ESAVERDE		1450 1784 2318 4911 7544
	e enclosed atta		(1 € 11 ·	ا لدان		1 Carles	Dancet		2 DOT D	enort	4. Direction	al Survey
	ectrical/Mecha andry Notice fo		`	• /	ı	<ol> <li>Geologic</li> <li>Core Ana</li> </ol>	-		3. DST Ro 7 Other:	eport	4. Direction	iai survey
			<u>.</u>		-							
34. I here	eby certify that	the forego		ronic Subm	ission #1	omplete and cor 46635 Verified E OIL & GAS	by the BLM	Well In	formation S		hed instructio	ns):
Name	e (please print)	CARA M	AHLER				Title	AUTHO	ORIZED RE	PRESENTATIVE		
	·	/El- 1	:- O. I ···'				n.	00/00/0	2012			
Signa	ature	(Electron	ic Submiss	ion)			Date	08/20/2	U12			
									1 '110 '1	*		
Title 18 V	U.S.C. Section nited States any	1001 and false, fict	Title 43 U.S. itious or frad	C. Section ulent staten	1212, mak nents or re	te it a crime for epresentations a	any person kn is to any matte	nowingly or within	and willfull its jurisdiction	y to make to any de on.	partment or a	gency

#### **Operation Summary Report**

Spud Date: 1/22/2012 Well: NBU 922-30C3S PURPLE Rig Name No: ENSIGN 139/139, PROPETRO 12/12 Project: UTAH-UINTAH Site: NBU 922-30D PAD End Date: 4/1/2012 Event: DRILLING Start Date: 11/21/2011

Active Datum: RKB @4.939.00usft (above Mean Sea

UWI: NW/NW/0/9/S/22/E/30/0/0/26/PM/N/1253/W/0/663/0/0

Active Datum: Ri	39.00usft (ab	ove Mean S	iea	UWI: NW/NW/0/9/S/22/E/30/0/0/26/PM/N/1253/W/0/663/0/0							
Date	A STATE OF S	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
1/22/2012	11 - veril de la 120	- 21:00	4.00	MIRU	01	С	P		SKID RIG TO THE NBU 922-30C3S (WELL 7 OF 7). LEVEL LOCATION, INSTALL DIVERTER HEAD AND BLOOIE LINE, BUILD DITCH, SPOT IN RIG, CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP HOLE PUMP. PRIME PUMP. INSPECT RIG.		
	21:00	- 22:30	1.50	PRPSPD	01	В	P		HELD PJSM. P/U 8" 1.83 BEND .17 RPG MUD MOTOR (2 nd RUN) (SN 775-77428). M/U QD507 12.25" BIT (20 TH RUN) (SN 7137067). SHOCK SUB RUN 2 SN (160-80488). TRIP IN CONDUCTOR TO SPUD.		
	22:30	- 22:45	0.25	DRLSUR	02	D	P		SPUD 01/22/2012 19:00. DRILL 12.25" HOLE 44'- 210' (166', 140'/HR). GPM 400. DH RPM 68 RPM=45, WOB 5-15 Kips. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K. DRAG 0 Kips. CIRC RESERVE W. 8.4 ppg WATER. DRILL DOWN TO 210' W/ 6" COLLARS.		
	22:45	- 0:00	1.25	DRLSUR	06	Α	P		TRIP OUT. LAY DOWN 6" DRILL COLLARS, 12 1/4 BIT. CHECK BIT AND MOTOR. PICK UP NEW Q506 11" BIT (1st RUN) (SN 7019741) SCRIBE MOTOR. P/U 8" DIRECTIONAL ASSEMBLY AND SCRIBE. INSTALL EM TOOL. TRIP IN TO 210' TO DRILL AHEAD.		
1/23/2012	0:00	- 6:00	6.00	DRLSUR	02	D	P		DRILL 11" HOLE ROTATE / SLIDE AND BUILD 12 DEGREE ANGLE FROM 210 ft.TO 920 ft. ( DH RPM 83 RPM=55, WOB 15-20K. PSI ON/OFF 1,1568 / 1360. UP/DOWN/ ROT 74/55/64 Kips.) DRAG @ 10 K. CIRC RESERVE W. 8.3 ppg. WATER.		
	6:00	- 6:30	0.50	DRLSUR	07	Α	₽		RIG SERVICE / CREW SM		
	6:30	- 0:00	17.50	DRLSUR	02	D	Р		DRILL 11" HOLE ROTATE / SLIDE AND BUILD 20 DEGREE ANGLE FROM 920 ft. TO 2,330 ft. ( DH RPM 83 RPM=55, WOB 15-25K. PSI ON/OFF 1720/ 1,500. UP/DOWN/ ROT 80/59/69 Kips.) DRAG 11 K. CIRC RESERVE W. 8.6 ppg. WATER.		
1/24/2012	0:00	- 6:45	6.75	DRLSUR	02	D	P		DRILL TO TD AT 2770 ft.		
		- 8:15	1.50	DRLSUR	05	Α	P		CIRCULATE AND CLEAN HOLE, PREPARE FOR TOOH.		
	8:15	- 11:30	3.25	DRLSUR	.06	D	P		LDDS FOR CASING RUN		
		- 12:30	1.00	DRLSUR	06	D	P		LAY DOWN DIRECTIONAL TOOLS. PULL MOTOR AND BREAK BIT, LAY DOWN MOTOR.		
		- 13:00	0.50	DRLSUR	12	Α	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CASING.		
	13:00	- 15:30	2.50	DRLSUR	12	С	Р		HOLD SAFETY MEETING. RUN 62 JNT'S OF 8-5/8" 28# J-55 LTC CSG. LAND FLOAT SHOE @ 2743' KB. LAND BAFFLE PLATE @ 2696' KB. RAN 5 TOTAL CENTRALIZERS.		
	15:30	- 16:30	1.00	DRLSUR	12	В	P		HOLD SAFETY MEETING, RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES, CEMENT HEAD, LOAD PLUG.		

			49		Opera	tion S	umma	ry Report
Well: NBU 922-3	0C3S P	JRPLE						Spud Date: 1/22/2012
Project: UTAH-L	IINTAH			Site: NBU	922-300	PAD		Rig Name No: ENSIGN 139/139, PROPETRO 12/12
Event: DRILLING	3			Start Date	: 11/21/2	011	<u> </u>	End Date: 4/1/2012
Active Datum: R Level)	KB @4,9	39.00usft (at	oove Mean S	ea	UWI: N\	N/NW/0/9	/S/22/E/3	0/0/0/26/PM/N/1253/W/0/663/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
Salahan, e jaja din Sarahi da Animala	16:30	- 19:00	2.50	DRLSUR	12	E	Р	PRESSURE TEST LINES TO 2000 PSI. PUMP 120 BBLS OF WATER AHEAD. MIX AND PUMP 20 BBLS OF 8,3# GEL WATER AHEAD. MIX AND PUMP (220 SX) 149.6 BBLS OF 11# 3.82 YD 23 GAL/SK HI FILL LEAD CEMENT. MIX AND PUMP (168.2 SX) 35.8 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 168.5 BBLS OF H20. FULL CIRCULATION THROUGH OUT. FINAL LIFT OF 600 PSI AT 4 BBL/MIN. BUMP PLUG AT DISPLACEMENT VOLUME. LAND THE PLUG WITH 800 PSI. SHUT DOWN HELD 800 PSI FOR 5 MIN. TESTED FLOAT AND FLOAT HELD. ABOUT 30 BBLS TO SURFACE BEFORE FALL BACK.
	19:00	- 22:00	3.00	DRLSUR	12		P	TOP OUT CEMENT TO SURFACE w/ 150 sx. SAME TAIL CEMENT (30.7 bbls.) AND 130 sx. BACKSIDE (26.6 bbls.) STOOD FULL, RIG DOWN CEMENTERS
	22:00	- 0:00	2.00	RDMO	01	Α	Р	RD/ RIG RELEASE AT 0000 hrs. 1-24-2012
3/25/2012	6:00	- 7:00	1.00	MIRU	01	С	P	SKID ON
	7:00	- 8:00	1.00	MIRU	14	Α	P	NUBOP,SET STACK DOWN
	8:00	- 10:00	2.00	PRPSPD	09	Α	Р	CUT & SLIP 95' DRLG LINE,INSTALL SLIDER FOR HZ WELL AND TEST
	10:00		4,00	PRPSPD	15	Α .	P	PRE SPUD SAFETY INSPECTION, TEST BOP RAMS, CHOKELINE, KILLINE, MANIFOLD, FLOOR VALVES 5000, ANNULAR 2500, CSG 1500 FOR 30 MIN, 250 LOWS, CHOKE VALVE 500
		- 15:30	1.50	PRPSPD	06	A	P	INSTALL WEARBUSHING,P/U BHA #1 SCRIBE DIR TOOLS,TIH LEVEL DERRICK,INSTALL ROT RUBBER
		- 16:00	0.50	PRPSPD	07	A	P	RIG SERVICE
		- 19:30	3.50	PRPSPD	06	A F	P P	TIH TO 2549,BREAK CIRCULATION DRILL CEMENT & SHOE TRACK TO 2780'
	19:30	- 21:00	1.50	DRLPRO	02 02	r D	P	DIR DRILL NEW 7.875 F/ 2780 TO 3118=338 AVG
	21.UU	- 0:00	3.00	DRLPRO	UZ	J	r	112 WOB 16/18 RPM 40/120 = 160 SPM 105 GPM 520 RPG .23 TORQ 5/9 PSI 1000/1500 DIFF 500 SLIDE 4.8% ROT 95% OF CENTER MUD WT 8.4 VIS 27 NOV DEWATERING WITH BOTH CENTRIFUGES,
3/26/2012	0:00	- 13:00 - 13:30	0.50	DRLPRO	02	D	P	DIR DRILL F/3118 TO 4474=1356 AVG 104 WOB 16/18 RPM 40/120 = 160 SPM 105 GPM 520 RPG .23 TORQ 5/9 PSI 1000/1500 DIFF 500 SLIDE 19% 264' ROT 81% 5' HIGH 1' RIGHT OF LINE MUD WT 8.4 VIS 29 NOV CONVENTIONAL WITH BOTH CENTRIFUGES, RIG SERVICE

## Operation Summary Report

Well: NBU 922-	30C3S P	URPLE	<u> </u>					Spud Date: 1/22/2012
Project: UTAH-I				Site: NBU	922-30D	PAD		Rig Name No: ENSIGN 139/139, PROPETRO 12/12
Event: DRILLIN		<del></del>		Start Date	e: 11/21/2	011	T	End Date: 4/1/2012
Active Datum: F		939,00usft (ab	ove Mean Se				/S/22/E/3	0/0/0/26/PM/N/1253/W/0/663/0/0
Level)		<u> </u>						
Date	s	Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
	13:30	- 0:00	10.50	DRLPRO	02	D	P	DIR DRILL F/4474 TO 5944=1470 AVG 140 WOB 16/18 RPM 40/120 = 160 SPM 105 GPM 520 RPG .23 TORQ 6/10 PSI 1200/1650 DIFF 450 SLIDE 7% ROT 93% 11'NORTH 5' WEST OF CENTER MUD WT 8.4 VIS 29
3/27/2012	0:00	- 3:30	3.50	DRLPRO	05	Α	\$	NOV CONVENTIONAL WITH BOTH CENTRIFUGES, LOST RETURNS,MIX LCM TRANSFER MUD REGAIN
	3:30 11:00	- 11:00 - 11:30	7.50 0.50	DRLPRO	02 07	D	P	RETURNS 18%,10.5/36.TOTAL LOST 800 BBLS  DIR DRILL F/5944 TO 6556=612 AVG 56  WOB 16/18 RPM 40/108 = 148  SPM 96 GPM 470 RPG .23  TORQ 6/10  PSI 1600/2000 DIFF 400  SLIDE 2%  ROT 98%  10'NORTH 8.5' WEST OF CENTER  MUD WT 10.7/36 LCM 20%  NOV BYPASS  RIG SERVICE
	11:30	- 0:00	12.50	DRLPRO	02	D	Р	DIR DRILL F/6556 TO 7165 =609 AVG 48  WOB 16/18 RPM 40/108 = 148  SPM 96 GPM 470 RPG .23  TORQ 6/10  PSI 1600/2000 DIFF 400  SLIDE 7%  ROT 93%  11'NORTH 6' WEST OF CENTER  MUD WT 10.7/36 LCM 20%  NOV BYPASS
3/28/2012	0:00	- 12:00	12.00	DRLPRO	02	D	Р	DIR DRILL F/ 7165 TO 7733 = 568 AVG @ 47.3  WOB 16/18 RPM 40/108 = 148  SPM 96 GPM 470 RPG .23  TORQ 6/10  PSI 1800/2200 DIFF 400  SLIDE 19' 3%  ROT 549' %  17'NORTH 7' WEST OF CENTER  MUD WT 11.0/37 LCM 18%  NOV BYPASS
		- 12:30 - 0:00	0.50 11.50	DRLPRO	07 02	A D	P P	RIG SER  DIR DRILL F/ 7733 TO 8144 = 411' AVG @ 35.7  WOB 16/18 RPM 40/108 = 148  SPM 96 GPM 470 RPG .23  TORQ 6/10  PSI 1800/2200 DIFF 400  SLIDE 0' 0%  ROT 411' 100%  19'NORTH 4.5' WEST OF CENTER  MUD WT 11.3/39 LCM 16%  NOV BYPASS

4:50:07PM

8/14/2012

Vell: NBU 922-3	OC3S P	JRPLE						Spud Date: 1/22/2012
roject: UTAH-U	INTAH			Site: NBU	922-30D	PAD		Rig Name No: ENSIGN 139/139, PROPETRO 12/12
vent: DRILLING	3			Start Date	: 11/21/2	011		End Date: 4/1/2012
ctive Datum: Ri	KB @4,9	39.00usft (ab	ove Mean Se	a	UWI: NV	V/NW/0/9	/S/22/E/:	i0/0/0/26/PM/N/1253/W/0/663/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
3/29/2012	0:00	- 5:30 - 15:00	5.50 9.50	DRLPRO DRLPRO	02	D	P	DIR DRILL F/ 8144 TO 8317 = 173' AVG @ 31.4 WOB 16/18 RPM 40/108 = 148 SPM 96 GPM 470 RPG .23 TORQ 6/10 PSI 1800/2200 DIFF 400 SLIDE 5' 1% ROT 406' 99% 19'NORTH 4.5' WEST OF CENTER MUD WT 11.3/39 LCM 16% NOV BYPASS T.F.N.B - PUMPED OUT 5 STANDS & CONT PULL
			0.00		33			PIPE W/ 70-80 K OVER STRING WT 185K - ( TIGHT SPOT @ 5982 - 5400 ) - L/D BIT & MOTOR & P/U BIT - MOTOR .16 RPG 1.5 BEND
		- 22:00	7.00	DRLPRO	06	Α	P	TRIP IN THE HOLE & WASH TO BTM 50' (NO FILL)
	22:00	- 0:00	2.00	DRLPRO	02	D	P	DIR DRILL F/ 8317 TO 8449 = 132' AVG @ 66.0  WOB 16/18 RPM 40/108 = 148  SPM 96 GPM 470 RPG .23  TORQ 6/10  PSI 1900/2300 DIFF 400  SLIDE18' 13%  ROT 114' 87%  19'NORTH 4.5' WEST OF CENTER  MUD WT 11.6 /39 LCM 16%  NOV BYPASS
3/30/2012		- 12:30	12.50	DRLPRO	02	D	P	DIR DRILL F/ 8449 TO 9096 = 647' AVG @ 51.76 WOB 16/18 RPM 40/108 = 148 SPM 96 GPM 470 RPG .23 TORQ 6/10 PSI 1900/2300 DIFF 400 SLIDE 0' 0% ROT 647' 100% 3.5'NORTH 5' EAST OF CENTER MUD WT 11.8/43 LCM 18% NOV BYPASS
		- 13:00	0.50	DRLPRO	07	A	P	SER RIG
		- 23:00	10.00	DRLPRO	02	D	Р	DIR DRILL F/ 9096 TO 9540 = 444' AVG @ 44.4 WOB 16/18 RPM 40/108 = 148 SPM 96 GPM 470 RPG .23 TORQ 6/10 PSI 1900/2300 DIFF 400 SLIDE 0' 0% ROT 444' 100% .5'NORTH 9' EAST OF CENTER MUD WT 12.1/43 LCM 18% NOV BYPASS
		- 0:00	1.00	DRLPRO	05	Α	P	CIRC BTM UP
3/31/2012	0:00	- 3:00	3.00	DRLPRO	06	E	P	WIPER TRIP 15 STANDS & BACK TO BTM
	3:00	- 4:00	1.00	DRLPRO	05	C	P	CIRC BTM UP
	4:00 19:00	- 19:00 - 0:00	15.00 5.00	DRLPRO	06	D C	P P	PUMPED OUT 15 STANDS & L.D.D.P & BHA & PULL WEAR BUSHING HELD S/M & R/U FRANKS CASING CREW & RUN 4.5

Well: NBU 922-	30C3S PU	JRPLE				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Spud Date: 1/22/2012
Project: UTAH-U	UINTAH			Site: NBU	922-30	PAD		Rig Name No: ENSIGN 139/139, PROPETRO 12/12
Event: DRILLIN	G			Start Date	e: 11/21/2	011		End Date: 4/1/2012
Active Datum: F Level)	RKB @4,9	39.00usft (ab	ove Mean Se	а	UWI: N	<b>N/NW/</b> 0/9	9/\$/22/E/30	0/0/0/26/PM/N/1253/W/0/663/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
4/1/2012	0:00	- 3:00 - 4:30	3.00	DRLPRO DRLPRO	12 05	C	P	FINISH RUNNING PROD CASING & SHOE @ 9498 & F/C @ 9456 CIRC BTM UP
	4:30	- 7:00	2.50	DRLPRO	12	E	P	SAFETY MEET W/ BJ SER,R/U PRESSURE TEST TO 5K,PUMP 25 BBL FRESH,WATER & ,492 SX LEAD @12.5 2.02 YLD- PLII+8%GEL +4%R-3+2%SMS+25#SK CELLOFLAKE+5#SK KOL-SEAL , F/ TAIL 1050 SKS # 14.3 - YLD 1.32 YLD 50:50+2%GEL+10%SALT+2%R-3 & ,DISPLACE 147 BBLS,FINAL LIFT 2399 PSI ,BUMP PLUG W/ 500 OVER & FLOATS HELD, NO WATER OR CEMENT BACK TO PIT, 2 BBLS WATER BACK TO TRUCK
	7:00	- 12:00	5.00	DRLPRO	14	Α	Р	N/D & SET C-22 SLIPS W/ 105K & ROUGH CUT 4.5 & WASH CLEAN OUT MUD TANKS & RELEASE RIG @

12:00 ON 4/1/2012

4:50:07PM 8/14/2012

#### 1 General

#### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

#### 1.2 Well/Wellbore Information

Well	NBU 922-30C3S PURPLE	Wellbore No.	ОН
Well Name	NBU 922-30C3S	Wellbore Name	NBU 922-30C3S
Report No.	1	Report Date	5/25/2012
Project	UTAH-UINTAH	Site	NBU 922-30D PAD
Rig Name/No.		Event	COMPLETION
Start Date	5/25/2012	End Date	7/2/2012
Spud Date	1/22/2012	Active Datum	RKB @4,939.00usft (above Mean Sea Level)
UWI	NW/NW/0/9/S/22/E/30/0/0/26/PM/N/1253/W/0/6	63/0/0	

#### 1.3 General

Contractor	Job I	Method	Supervisor	
Perforated Assembly	Conv	rveyed Method		

#### 1.4 Initial Conditions

Fluid Type		Fluid Density	
Surface Press		Estimate Res Press	
TVD Fluid Top		Fluid Head	
Hydrostatic Press		Press Difference	
Balance Cond	NEUTRAL		

#### 1.5 Summary

Gross interval	6,262.0 (usft)-9,442.0 (usft	Start Date/Time	5/25/2012 12:00AM
No. of Intervals	74	End Date/Time	5/25/2012 12:00AM
Total Shots	261	Net Perforation Interval	83.00 (usft)
Avg Shot Density	3.14 (shot/ft)	Final Surface Pressure	
		Final Press Date	

#### 2 Intervals

#### 2.1 Perforated Interval

Date	Formation/	CCL@	CCL-T	MD Top	100	Shot	Misfires/	Diamete	Carr Type /Stage No	Carr	Phasing	Charge Desc /Charge	Charge	Reason	Misrun
	Reservoir	(usft)	S (usft)	(usft)		Density (shot/ft)	Add. Shot	r (in)		Size (in)	(	Manufacturer	Weight (gram)		
5/25/2012	WASATCH/			6,262.0	6,267.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	

Date	Formation/ CCL@		MD Top	MD Base (usft)	Shot Density	Misfires/ Add. Shot	Diamete	Carr	Type /Stage No	Carr Size	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight	Reason	Misrun
		(usft)	,,	(==.9	(shot/ft)	,	(in)			(in)		Mandacale	(gram)		
	WASATCH/		6,352.0	6,353.0	3.00		0.360	EXP/		3.375	120.00			PRODUCTIO	1
12:00AM														N	
	WASATCH/	1	6,411.0	6,412.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
	WASATCH/		6,644.0	6,645.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM											122.21			, N	
12:00AM	WASATCH/		6,709.0	6,710.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	:
	WASATCH/		6.734.0	6,735.0	3.00		0.360	EVD/		3.375	100.00		00.00	N	1
12:00AM	WASATCH/		0,734.0	0,735.0	3.00		0.360	EAM		3.375	120.00		23.00	PRODUCTIO N	
	WASATCH/		6,755.0	6,756.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM				,	0.00					0.010	120.00		20.00	N	
5/25/2012	WASATCH/		6,816.0	6,817.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM											į			N	İ
	WASATCH/		6,834.0	6,835.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
	WASATCH/		6,860.0	6,861.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM	Amar-am e e e													N	
5/25/2012 12:00AM	WASATCH/		6,871.0	6,872.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
1	WASATCH/		6,964.0	6,965.0	3.00		0.360	EVD/		3.375	120.00		22.00	N	·
12:00AM	VAOATOIII		0,304.0	0,300.0	3.00		0.300	EXF/		3.313	120.00		23.00	PRODUCTIO N	
5/25/2012	WASATCH/		6,985.0	6,986.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM			.,		:						, , ,	:	20.00	·N	
5/25/2012	WASATCH/		7,028.0	7,029.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
	WASATCH/		7,058.0	7,059.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM			2.7.22											N	
12:00AM	WASATCH/		7,148.0	7,149.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
	WASATCH/		7.180.0	7.181.0	3.00		0.360	EVD/		3.375	120.00		22.0	N	
12:00AM	WASATCH		7,100.0	7,101.0	3.00		0.300	EAF/		3.375	120.00		23.00	PRODUCTIO N	
1	WASATCH/		7,190.0	7,191.0	3.00		0.360	FXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM			. ,,	,	0.00		0.000			0.070	120.00		20.00	N	
5/25/2012	WASATCH/		7,217.0	7,218.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
1	WASATCH/		7,277.0	7,278.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM														N	
	WASATCH/		7,298.0	7,299.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM	MAGATOW.		7.044.0	7.046.0										N	<i>i</i>
12:00AM	WASATCH/		7,311.0	7,312.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12.00/10	and a second manager of second control of the second control of th											: : : : : : : : : : : : : : : : : : :		N	<u> </u>

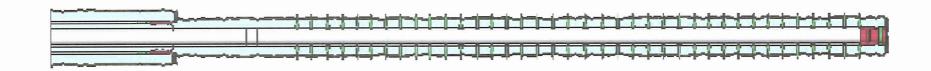
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr	Si	arr ize in)	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/25/2012	WASATCH/	1 10 22 12	1	7,424.0	7,425.0	3.00		0.360	EXP/		3.375	120.00			PRODUCTIO	1
12:00AM															·N	
	WASATCH/			7,447.0	7,448.0	3.00		0.360	EXP/	;	3.375	120.00		23.00	PRODUCTIO	
12:00AM	<u></u>														N	
5/25/2012 12:00AM	WASATCH/			7,473.0	7,474.0	3.00		0.360	EXP/	; ;	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	WASATCH/			7,493.0	7,494.0	3.00		0.360	EXP/	. :	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	WASATCH/			7,512.0	7,513.0	3.00		0.360	EXP/	· · · · · · · · · · · · · · · · · · ·	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/		1 1	7,578.0	7,580.0	3.00		0.360	EXP/	· · · · · · · · · · · · · · · · · · ·	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		! !	7,605.0	7,606.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,625.0	7,626.0	3.00		0.360	EXP/	•	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	1		7,676.0	7,677.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,700.0	7,701.0	3.00		0.360	EXP/	:	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			7,764.0	7,765.0	3.00		0.360	EXP/	· · · · · · · · · · · · · · · · · · ·	3.375	120.00		23.00	PRODUCTIO N	:
5/25/2012 12:00AM	MESAVERDE/			7,799.0	7,800.0	3.00		0.360	EXP/	; ;	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/	1		7,845.0	7,846.0	3.00		0.360	EXP/		3.375	120.00	· · · · · · · · · · · · · · · · · · ·	23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/	1		7,910.0	7,912.0	3.00		0.360	EXP/	· · · · · · · · · · · · · · · · · · ·	3.375	120.00		23.00	PRODUCTIO N	3
5/25/2012 12:00AM	MESAVERDE/			7,943.0	7,944.0	3.00		0.360	EXP/	;	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			7,991.0	7,992.0	3.00		0.360	EXP/	· · · · · · · · · · · · · · · · · · ·	3.375	120.00		23.00	PRODUCTIO N	-
5/25/2012 12:00AM	MESAVERDE/			8,132.0	8,134.0	3.00		0.360	EXP/	•	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,156.0	8,157.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,237.0	8,238.0	3.00		0.360	EXP/	; ;	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,254.0	8,255.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	:
5/25/2012 12:00AM	MESAVERDE/			8,293.0	8,294.0	3.00		0.360	EXP/	· · · · · · · · · · · · · · · · · · ·	3.375	120.00		23.00	PRODUCTIO N	

Date	Formation/	CCL@	CCL-T	MD Top	MD Base	Shot	Misfires/	Diamete	Carr Ty	pe /Stage No	Carr	Phasing	Charge Desc/Charge	Charge	Reason	Misrun
	Reservoir	(usft)	S (usft)	(usft)	(usft)	Density (shot/ft)	Add. Shot	r (in)			Size (in)	(°)	Manufacturer	Weight (gram)		
5/25/2012	MESAVERDE/	<del>nile sinata e e il</del>	(	8,337.0	8,338.0			0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM															N	
	MESAVERDE/		:	8,351.0	8,352.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO	
12:00AM	·	1							= 1/5/			100.00		00.00	N	
5/25/2012 12:00AM	MESAVERDE/			8,424.0	8,425.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,474.0	8,475.0	3.00		0.360	EXP/		3.375	120.00			PRODUCTIO N	
	MESAVERDE/			8,502.0	8,503.0	3.00		0.360	EXP/		3.375	120.00			PRODUCTIO N	:
	MESAVERDE/			8,554.0	8,555.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	3
1	MESAVERDE/			8,576.0	8,578.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,644.0	8,645.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,663.0	8,664.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,680.0	8,681.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,709.0	8,710.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,728.0	8,729.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
The state of the state of	MESAVERDE/			8,770.0	8,771.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			8,789.0	8,790.0	4.00		0.360	EXP/		3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,822.0	8,823.0	4.00		0.360	EXP/		3.375	90.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,859.0	8,860.0	4.00		0.360	EXP/		3.375	90.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,888.0	8,889.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,914.0	8,916.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,965.0	8,966.0	4.00		0.360	EXP/		3.375	90.00		23.00	PRODUCTIO N	
1	MESAVERDE/			8,984.0	8,985.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			9,015.0	9,016.0	3.00		0.360	EXP/		3.375	120.00		23.00	PRODUCTIO N	

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc/Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/25/2012 12:00AM	MESAVERDE/			9,037.0	9,038.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,063.0	9,064.0	4.00		0.360	EXP/	3.375	90.00			PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,118.0	9,119.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,133.0	9,134.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,198.0	9,199.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,239.0	9,240.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,268.0	9,269.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,329.0	9,330.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,384.0	9,385.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
5/25/2012 12:00AM	MESAVERDE/			9,441.0	9,442.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

#### 3 Plots

#### 3.1 Wellbore Schematic



							KIES REGI	
//well: NBU 922-3	30C3S PUR	RPLE	<u></u>	<u> </u>				oud Date: 1/22/2012
Project: UTAH-U	JINTAH			Site: NBI	J 922-30D	PAD		Rig Name No: MILES 2/2, MILES 2/2
Event: COMPLE				Start Dat	e: 5/25/20	12	T	End Date: 7/2/2012
Active Datum: R		0.00usft (ab	ove Mean Se				9/S/22/E/30/0/	0/26/PM/N/1253/W/0/663/0/0
Date	The last Levi Cale	me t-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
1/22/2012 5/25/2012	6:00 -	- 8:00	2.00	COMP	33		P	FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 6 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 44 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 113 PSI. 2ND PSI TEST T/ 7000 PSI. HELD FOR 30 MIN. LOST 75 PSI. NO COMMUNICATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL. SWIFW
5/26/2012	8:30 -	- - 8:45	0.25	COMP	48		P	HSM & JSA W/CASEDHOLE SOLUATIONS.
6/1/2012	15:43 -		1.35	COMP	37	В	P	WHP 0 PSI. MIRU CASEDHOLE SOLUATIONS. STG 1) P/U 3 1/8" EXP GNS, 23 gm, 0.36 HOLE, 24 HOLES. PERF THE M.V. (((COULD NOT GET DWN TO BTM PERFS @ 9449' - 50', 4 SPF. CALL DNVR - SHOOT @ 9441' - 42', 4 SPF AS PER ENGINEER))). CONT TO PERF AS PER DESIGN. POOH W/TOOLS & TIE BACK LUB. SWI - SDFWE
6/3/2012	6:30 -	7:00	0.50	COMP	48		P	HSM & JSA W/HALLIBURTON & CASEDHOLE SOLUATIONS.
	9:14 -	9:49	0.58	COMP	36	E	Р	MIRU HALCO FRAC EQUIP. PT SURFACE EQUIP TO 8800 PSI. FRAC STG 1) WHP 1612 PSI. BRK DWN PERF 4.8

RATE 50.2 BPM @ 4735 PSI. 24/24 PERFS OPEN -100%. MP 4532 PSI, MR 50.2 BPM, AP 4492 PSI, AR 50 BPM. ISIP 2818 PSI, FG. 0.74, NPI (-108) PSI. PMP'D 1511 BBLS SLK WTR, 26,400 LBS 30/50

BPM @ 3204 PSI, ISIP 2926 PSI, FG. 0.75. EST INJ

SND. X-OVER FOR WL. PERF STG 2) P/U HALCO 8K CBP & 3 1/8" EXP GNS,

23 GRM, 0,36 HOLE, 90 & 120 DEG PHSG. RIH SET CBP @ 9164'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC STG 2) WHP 2344 PSI. BRK DWN PERF 4.9

BPM @ 4700 PSI. ISIP 2779 PSI. FG. 0.74. EST INJ RATE 47.7 BPM @ 4630 PSI. 23/24 PERFS OPEN -MP 4657 PSI, MR 50.1 BPM, AP 4532 PSI, AR 49.9 BPM. ISIP 2554 PSI, FG. 0.72, NPI (-225) PSI.

PMP'D 1395 BBLS SLK WTR, 27,800 LBS 30/50 SND. X-OVER FOR WL.

PERF STG 3) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 90 & 120 DEG PHSG. RIH SET CBP @ 8,946'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR

FRAC

9:54 - 10:54

13:13 - 13:45

13:49 - 14:49

1.00

0.53

1.00

COMP

COMP

COMP

37

36

37

В

Ε

Ρ

## **Operation Summary Report**

Well: NBU 922-	30C3S PL	JRPLE			<u>, , , , , , , , , , , , , , , , , , , </u>	فنوجه فتها فيخطف الأندون		Spud Date: 1/22/2012
Project: UTAH-	UINTAH			Site: NBU	J 922-30D	PAD		Rig Name No: MILES 2/2, MILES 2/2
Event: COMPLI	ETION			Start Date	e: 5/25/20	12		End Date: 7/2/2012
Active Datum: F Level)	RKB @4,9	39.00usft (al	bove Mean S	<b>Э</b> а	UWI: NV	N/NW/0/9	9/S/22/E/3	30/0/0/26/PM/N/1253/W/0/663/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
		- 18:01	0.48	COMP	36	E	Р	FRAC STG 3) WHP 2109 PSI. BRK DWN PERF 4.7 BPM @ 3126 PSI. ISIP 2853 PSI. FG. 0.76. EST INJ RATE 48.9 BPM @ 4187 PSI. 24/24 PERFS OPEN - 100%. MP 4454 PSI, MR 49.1 BPM, AP 4144 PSI, AR 49 BPM. ISIP 2252 PSI, FG. 0.69, NPI (-601) PSI. PMP'D 1187 BBLS SLK WTR, 23,300 LBS 30/50 SND. X-OVER FOR WL.
	18.06	- 19:06	1.00	COMP	37	В	P	PERF STG 4) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 90 & 120 DEG PHSG. RIH SET CBP @ 8759'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC. SWI - SDFN.
6/5/2012	6:15	- 6:30	0.25	COMP	48		P	HSM & JSA W/HALLIBURTON & CASEDHOLE SOLUATIONS
	8:37	- 9:10	0.55	COMP	36	E	Р	FRAC STG 4) WHP 2101 PSI. BRK DWN PERF 3.8 BPM @ 3031 PSI. ISIP 2153 PSI. FG. 0.68. EST INJ RATE 49.7 BPM @ 4290 PSI. 23/24 PERFS OPEN - 100%. MP 3965 PSI, MR 50 BPM, AP 3833 PSI, AR 49.9 BPM. ISIP 2424 PSI, FG. 0.71, NPI 271 PSI. PMP'D 1462 BBLS SLK WTR, 18,000 LBS 30/50 SND. X-OVER FOR WL.
	9:15	- 10:15	1.00	COMP	37	В	P	PERF STG 5) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 8533'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
	10:55	- 11:22	0.45	COMP	36	E	P	FRAC STG 5) WHP 2147 PSI. BRK DWN PERF 4.8 BPM @ 3953 PSI. ISIP 3361 PSI. FG. 0.83. EST INJ RATE 49.8 BPM @ 4209 PSI. 24/24 PERFS OPEN - 100%. MP 4286 PSI, MR 50.2 BPM, AP 4083 PSI, AR 49.9 BPM. ISIP 2532 PSI, FG. 0.74, NPI (-789) PSI. PMP'D 1118 BBLS SLK WTR, 21,500 LBS 30/50 SND. X-OVER FOR WL.
	11:27	- 12:27	1.00	COMP	37	В	P	PERF STG 6) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 8187'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
	12:58	- 13:22	0.40	COMP	36	E	P	FRAC STG 6) WHP 1118 PSI. BRK DWN PERF 5 BPM @ 3563 PSI. ISIP 2071 PSI. FG. 0.69. EST INJ RATE 50.8 BPM @ 3759 PSI. 24/24 PERFS OPEN - 100%. MP 3834 PSI, MR 50.8 BPM, AP 3447 PSI, AR 50.5 BPM. ISIP 2152 PSI, FG. 0.70, NPI 81 PSI. PMP'D 1093 BBLS SLK WTR, 21,300 LBS 30/50 SND. X-OVER FOR WL
	13:27	- 14:27	1.00	COMP	37	В	Р	PERF STG 7) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 7830'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC

Well: NBU 922-3		URPLE		T-				Spud Date: 1/22/2012
Project: UTAH-L	JINTAH			Site: NBI	J 922-30E	PAD		Rig Name No: MILES 2/2, MILES 2/2
Event: COMPLE	TION			Start Dat	e: 5/25/20			End Date: 7/2/2012
Active Datum: R _evel)	KB @4,9	939,00usft (al	bove Mean Se	ea	UWI: N	W/NW/0/9	9/S/22/E/30	/0/0/26/PM/N/1253/W/0/663/0/0
Date		Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From Operation (usft)
	14:59	- 15:34	0.58	COMP	36	E	P	FRAC STG 7) WHP 1688 PSI. BRK DWN PERF 4.8 BPM @ 2001 PSI. ISIP 1727 PSI. FG. 0.66. EST INJ RATE 50.3 BPM @ 3317 PSI. 24/24 PERFS OPEN - 100%. MP 3334 PSI, MR 50.4 BPM, AP 3213 PSI, AR 50.2 BPM. ISIP 1944 PSI, FG. 0.69, NPI 117 PSI. PMP'D 1604 BBLS SLK WTR, 33,100 LBS 30/50 SND. X-OVER FOR WL.
	15:39	- 16:39	1.00	COMP	37	В	Р	PERF STG 8) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 7543'. PERF WASATCH AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
		- 17:56	0.30	COMP	36	Έ	P	FRAC STG 8) WHP 1205 PSI. BRK DWN PERF 4.7 BPM @ 2490 PSI. ISIP 1662 PSI. FG. 0.66. EST INJ RATE 47.8 BPM @ 3747 PSI. 21/24 PERFS OPEN - 87%. MP 4470 PSI, MR 50.4 BPM, AP 3827 PSI, AR 50.3 BPM. ISIP 2202 PSI, FG. 0.73, NPI 540 PSI. PMP'D 866 BBLS SLK WTR, 19,300 LBS 30/50 SND. X-OVER FOR WL.
	18:01	- 19:01	1.00	COMP	37	В	Р	PERF STG 9) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 7248'. PERF WASATCH AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC. SWI - SDFN
6/6/2012	6:45	- 7:00	0.25	COMP	48		Р	HSM & JSA W/HALLIBURTON & CASEDHOLE SOLUATIONS
	8:04	- 8:23	0.32	COMP	36	E	P	FRAC STG 9) WHP 422 PSI. BRK DWN PERF 5.1 BPM @ 3039 PSI. ISIP 1157 PSI. FG. 0.60. EST INJ RATE 50 BPM @ 3478 PSI. 21/24 PERFS OPEN - 87%. MP 3611 PSI, MR 50.2 BPM, AP 3380 PSI, AR 50.1 BPM. ISIP 1803 PSI, FG. 0.69, NPI 646 PSI. PMP'D 807 BBLS SLK WTR, 22,900 LBS 30/50 SND. X-OVER FOR WL.
	8:28	- 9:28	1.00	COMP	37	В	P	PERF STG 10) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 6912". PERF WASATCH AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
	9:58	- 10:17	0.32	COMP	36	E	P	FRAC STG 10) WHP 1406 PSI. BRK DWN PERF 4.9 BPM @ 1653 PSI. ISIP 1435 PSI. FG. 0.65. EST INJ RATE 50.1 BPM @ 2897 PSI. 24/24 PERFS OPEN - 100%. MP 3050 PSI, MR 50.2 BPM, AP 2879 PSI, AR 50.1 BPM. ISIP 1580 PSI, FG. 0.67, NPI 145 PSI. PMP'D 763 BBLS SLK WTR, 21,700 LBS 30/50 SND. X-OVER FOR WL.
	10:22	- 11:22	1.00	COMP	37	В	Р	PERF STG 11) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 6462". PERF WASATCH AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC

ell: NBU 922-	-30C3S P	URPLE						Spud Date: 1/2	2/2012
oject: UTAH-	UINTAH			Site: NBL	922-30	PAD			Rig Name No: MILES 2/2, MILES 2/2
ent: COMPL	ETION			Start Date	e: 5/25/20	)12			End Date: 7/2/2012
	RKB @4,9	39,00usft (at	ove Mean Se	ea	UWI: N	W/NW/0/9	9/S/22/E/3	0/0/0/26/PM/N/1	253/W/0/663/0/0
vel)	70 (Sec. 8)			Phase	Code	15.25.63.1	P/U	500 SV 02-57 (05-5)	
Date	The Colonia Control	Time art-End	Duration (hr)	riidee	Coue	Sub Code	F/U	MD From (usft)	Operation
		- 12:25	0.08	COMP	36	E	P	(usi)	FRAC STG 11) WHP 302 PSI. BRK DWN PERF 4.8 BPM @ 1903 PSI. ISIP 0 PSI. FG. 0.42. WELL SUCKING @ 7 BPM. ((( DID NOT FRAC ZONE ))). SWI @ FRAC VALVES.
									TOTAL WTR USED 11,814 BBLS TOTAL 30/50 SAND 245,510 LBS TOTAL SI 0,000 GAL TOTAL BIO 0,000 GAL
6/29/2012	7:00	- 7:15	0.25	COMP	48		Р		JSA-SAFETY MEETING
	7:15	- 9:00	1.75	COMP	30	A	Р		MIRU UNIT, N/D WH, N/U BOPS,
7/0/0040	9:00 7:00	- 15:00	6.00	COMP	31	ſ	Р		P/U 3 7/8" BIT AND POBS, RIH W/ 2 3/8" L-80 TBG W/ TALLY AND BROACH TBG IN, TAG @ 6490', PREPARE TO DRILL OUT MONDAY, SDFWE,
7/2/2012	7:30	- 7:30 - 17:00	0.50 9.50	DRLOUT DRLOUT	48 44		iP P		MILLING PLUGS DRILL 10 PLUGS
									PLUG# 2 6912' 30' SAND 5 MIN 100# KICK PLUG# 3 7248' 50' SAND 5 MIN 300# KICK PLUG# 4 7543' 30' SAND 5 MIN 300# KICK PLUG# 5 7830' 30' SAND 5 MIN 400# KICK PLUG# 6 8187' 50' SAND 5 MIN 400# KICK PLUG# 7 8533' 30' SAND 5 MIN 800# KICK PLUG# 8 8759' 30' SAND 5 MIN 700# KICK PLUG# 9 8946' 30' SAND 5 MIN 400# KICK PLUG# 9 8946' 30' SAND 5 MIN 400# KICK PLUG# 9 164' 45' SAND 5 MIN 500# KICK
									C/0 TO PBTD 9469', LAND TBG, EOT 8936.30', ND BOP'S, NUWH, DROP BALL, POBS, 2600#, TURN TO FBC, SDFN
									PBTD 9469' BTM PERF 9450'
									TBG 281 JTS 8919.27' HANGER 4.125" .83' KB 14.00' XNSN 1.875" 2.20' EOT 8936.30'
									FRAC WTR 11,814 BBLS RCD 3,100 BBLS LTR 8,714 BBLS
7/3/2012		-							-,
7/4/2012		~							



**Project: Uintah County, UT UTM12** Site: NBU 922-30D PAD

Well: NBU 922-30C3S

Wellbore: OH Design: OH

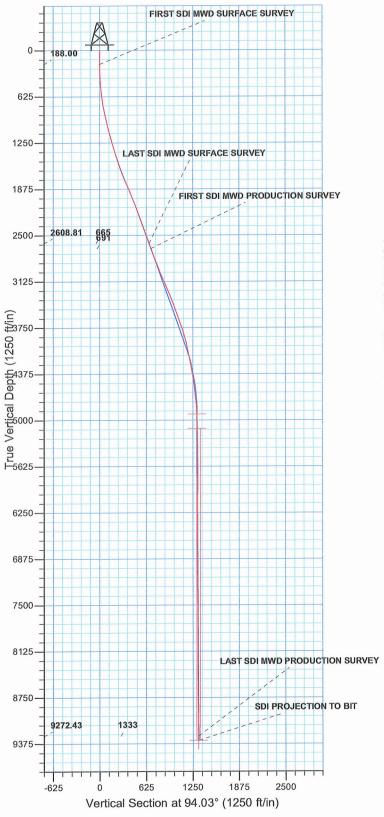


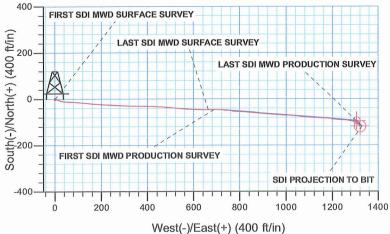
T

Azimuths to True North Magnetic North: 11.08°

> Magnetic Field Strength: 52340.5snT Dip Angle: 65.88° Date: 06/02/2011 Model: IGRF2010







PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 30 T9S R22E

System Datum: Mean Sea Level

Design: OH (NBU 922-30C3S/OH)

Created By: Gabe Kendall Date: 15:17, April 05 2012



# Kerr McGee Oil and Gas Onshore

LP

Uintah County, UT UTM12 NBU 922-30D PAD NBU 922-30C3S

OH

Design: OH

## **Standard Survey Report**

05 April, 2012







Company:

Kerr McGee Oil and Gas Onshore LP

Project: Site:

Uintah County, UT UTM12 NBU 922-30D PAD

Well: Wellbore: Design:

NBU 922-30C3S OH ОН

Local Co-ordinate Reference:

Survey Calculation Method:

**TVD Reference:** 

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

EDM 5000,1 Single User Db

Project

Uintah County, UT UTM12

Map System: Geo Datum:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US

Map Zone:

Zone 12N (114 W to 108 W)

System Datum:

MD Reference:

Database:

North Reference:

Mean Sea Level

Site

NBU 922-30D PAD, SECTION 30 T9S R22E

Site Position:

Lat/Long

Northing:

14,533,586.35 usft

Latitude:

40.010842

Easting:

2,063,914.56 usft

Longitude:

-109.487614

**Position Uncertainty:** 

0.00 ft

Slot Radius:

13.200 in

**Grid Convergence:** 

0.97

Well

NBU 922-30C3S, 1253 FNL 662 FWL

Well Position

0.00 ft 0.00 ft

Northing: Easting:

14,533,586.35 usft 2,063,914.56 usft Latitude:

40.010842

**Position Uncertainty** 

0.00 ft

Wellhead Elevation:

ft

Longitude: **Ground Level:** 

-109.487614 4,925.00 ft

Wellbore

ОН

+N/-S

+E/-W

Magnetics

**Model Name** 

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

06/02/11

11.08

65.88

0.00

52,341

Design

**Audit Notes:** 

Version:

1.0

ОН

Phase:

**ACTUAL** 

Tie On Depth:

Vertical Section:

Depth From (TVD)

+N/-S (ft)

+E/-W (ft)

0.00

Direction

0.00 0.00

(°)

94.03

Survey Program

04/05/12 Date

From (ft)

(ft) Survey (Wellbore)

**Tool Name** 

Description

10.00 2,792.00 2,715.00 Survey #1 SDI MWD SURFACE (OH) 9,540.00 Survey #2 SDI MWD PRODUCTION (OH) MWD SDI MWD SDI MWD - Standard ver 1.0.1 MWD - Standard ver 1.0.1

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (*/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
188.00	0.70	79.38	188.00	0.20	1.07	1.05	0.39	0.39	0.00
FIRST SDI M	WD SURFACE S	<b>SURVEY</b>							
274.00	1.67	94.85	273.98	0.19	2.83	2.81	1.18	1.13	17.99
355.00	2.64	107.07	354.92	-0.46	5.79	5.81	1.32	1.20	15.09
445.00	4.31	118.14	444.75	-2.66	10.76	10.92	1.99	1.86	12.30
535.00	5.72	108.65	534.41	-5.69	17.99	18.34	1.81	1.57	-10.54
625.00	7.65	103.29	623.79	-8.50	28.07	28.60	2,25	2.14	-5.96
715.00	9.50	97.31	712.78	-10.82	41.27	41.93	2.28	2.06	-6.64





Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site:

NBU 922-30D PAD NBU 922-30C3S

Well: Wellbore: Design:

ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Section (ft)	Rate (°/100ft)	Rate (°/100ft)	Rate (°/100ft)
		92.21	801.42	-12.08	56.80	57.51	1.45	1.07	-5.67
805.00	10.46	92.21	001.42	-12.00	50.00	07.01	1.40	1.07	0.07
895.00	12.31	90.28	889.65	-12.45	74.56	75.25	2.10	2.06	-2.14
985.00	13.10	96.52	977.45	-13.65	94.29	95.01	1.76	0.88	6.93
1,075.00	14.07	96.96	1,064.93	-16.13	115.28	116.13	1.08	1.08	0.49
1,165.00	15.21	93.97	1,152.01	-18.28	137.92	138.86	1.52	1.27	-3.32
1,255.00	16.53	95.38	1,238.57	-20.30	162.44	163.47	1.53	1.47	1.57
1,345.00	16.97	94.06	1,324.75	-22.43	188.29	189.40	0.65	0.49	-1.47
1,435.00	17.41	93.62	1,410.73	-24.21	214.83	216.00	0.51	0.49	-0.49
1,525.00	18.91	92.57	1,496.25	-25.71	242.84	244.04	1.71	1.67	-1.17
1,615.00	19.26	94.67	1,581.30	-27.57	272.20	273.47	0.86	0.39	2,33
1,705.00	21.19	91.86	1,665.75	-29.31	303.26	304.57	2.40	2.14	-3.12
1,795.00	22.07	92.21	1,749.41	-30.49	336.41	337.72	0.99	0.98	0.39
1,885.00	22.42	90.02	1,832.72	-31.15	370.47	371.74	1.00	0.39	-2.43
1,975.00	22.16	90.46	1,915.99	-31,29	404.61	405.80	0.34	-0.29	0.49
2,065.00	21.98	93.44	1,999.40	-32.44	438.39	439.59	1.26	-0.20	3.31
2,155.00	21.02	94.41	2,083.14	-34.69	471.30	472.57	1.14	-1.07	1.08
2,245.00	19,96	95,82	2,167.44	-37.49	502.68	504.07	1.30	-1.18	1.57
2,335.00	20.49	95.64	2,251.89	-40.59	533.63	535.17	0.59	0.59	-0.20
2,425.00	19.61	94.06	2,336.44	-43,21	564.38	566.02	1.15	-0.98	-1.76
2,515.00	20.40	93.00	2,421.01	-45.10	595.11	596.80	0.97	0.88	-1.18
2,605.00	20.31	91.95	2,505.39	<b>-</b> 46.45	626.38	628.10	0.42	-0.10	-1.17
2,715.00	19.52	88.79	2,608.81	<b>~46</b> .71	663.84	665.48	1.21	-0.72	-2.87
LAST SDI M	WD SURFACE S	URVEY							
2,792.00	19.36	89.32	2,681.42	-46.29	689.46	691.01	0.31	-0.21	0.69
FIRST SDI N	IWD PRODUCTI	ON SURVEY							
2,882.00	20.01	91.99	2,766.16	-46.65	719.76	721.26	1.23	0.72	2.97
2,973.00	20.90	97.73	2,851.43	-49.37	751.41	753.03	2.41	0.98	6.31
3,063.00	22.87	96.01	2,934.94	<b>-</b> 53.36	784.72	786.53	2.30	2.19	-1.91
3,154.00	21.96	93.77	3,019.07	-56.33	819.28	821.22	1.37	-1.00	-2.46
3,244.00	23.79	96.63	3,101.99	-59.54	854.11	856.18	2.38	2.03	3.18
3,335.00	23.45	94.73	3,185.37	-63.15	890.39	892.62	0.92	-0.37	-2.09
3,425.00	22.78	93,60	3,268.14	-65.72	925.62	927.95	0.89	-0.74	-1.26
3,516.00	21.86	93.74	3,352.32	-67.93	960.11	962.51	1.01	-1.01	0.15
3,606.00	20.22	92.78	3,436.32	-69.78	992.37	994.82	1.86	-1.82	-1.07
3,697.00	18.78	93.84	3,522.10	-71.52	1,022.69	1,025.19	1.63	-1.58	1.16
3,787.00	19.91	96.86	3,607.02	-74.32	1,052.36	1,054.98	1.68	1.26	3.36
3,877.00	19,92	96.09	3,691.64	-77.78	1,082.82	1,085.61	0.29	0.01	-0.86
3,968.00	16.84	92.71	3,777.99	-80.05	1,111.41	1,114.29	3.58	-3.38	-3.71
4,058.00	15.86	93.97	3,864.35	-81.52	1,136.70	1,139.62	1.16	-1.09	1.40
4,149,00	13.62	90,99	3,952.35	-82.56	1,159.82	1,162.76	2.60	-2.46	-3.27
4,239.00	13.33	96.29	4,039.87	-83.88	1,180.73	1,183.71	1.41	-0.32	5.89
4,330.00	11.52	97.03	4,128.74	-86.14	1,200.18	1,203.27	2.00	-1.99	0.81
4,420.00	10.49	96.15	4,217.08	-88.12	1,217.25	1,220.43	1.16	-1.14	-0.98





Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 922-30D PAD NBU 922-30C3S

Wellbore: Design: OH OH Local Co-ordinate Reference:

Survey Calculation Method:

TVD Reference:

MD Reference:

North Reference:

Database:

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

Measured			Vertical			Vertical	Dogleg	Build	Turn
Measured Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
4,511.00		95.13	4,306.68	-89.69	1,233.08	1,236.33	0.94	-0.92	-1.12
4,601.00		94.06	4,395.47	-90.87	1,247.73	1,251.03	0.59	-0.56	-1.19
		95.24	4,485.41	-91.99	1,261.54	1,264.88	0.89	-0.87	1.30
4,692.00			•	-93.81	1,273.88	1,277.33	1.32	-0.83	7.34
4,782.00		101.85	4,574.54			1,288.28	1.46	-1.42	-2.88
4,873.00	6.32	99.23	4,664.86	-95.85	1,284.72	1,266.26	1.40	-1,42	-2.00
4,963.00	5.24	101.41	4,754.41	-97.46	1,293.64	1,297.29	1.22	-1.20	2.42
5,054.00	3.23	99.66	4,845.15	-98.71	1,300.24	1,303.97	2,21	-2.21	-1.92
5,144.00		101.28	4,935.02	-99.60	1,305.08	1,308.85	0.24	-0.22	1.80
5,235.00		114.18	5,025.95	-100.51	1,308.42	1,312.25	1.90	-1.84	14.18
5,325.00		120.13	5,115.93	-101.33	1,310.05	1,313.94	0.45	-0.43	6.61
E 446 00	1 27	121,43	5,206.91	-102.25	1,311.58	1,315.52	0.33	0.33	1.43
5,416.00		139.62	5,206.91	-102.23 -103.59	1,313.13	1,317.16	0.48	0.11	20,21
5,506.00		150.23	5,296.69	-105.28	1,313.13	1,317.10	0.40	-0.12	11.66
5,597.00						1,319.58	0.15	0.12	3,36
5,687.00		153,25	5,477.84	-107.11	1,315.31	,		-1.29	-182.65
5,778.00	0.21	347.04	5,568.83	-107.93	1,315.77	1,320.10	1.74	-1.28	-102.00
5,868.00	0.26	307.16	5,658.83	-107.64	1,315.57	1,319.88	0.19	0.06	-44.31
5,959.00	0.63	284.89	5,749.83	-107.39	1,314.92	1,319.21	0.44	0.41	-24.47
6,049.00		285.48	5,839.82	-107.14	1,313.99	1,318.27	0.04	-0.04	0.66
6,140.00		245.69	5,930,82	-107,10	1,313,35	1,317.62	0.46	-0.35	-43,73
6,230.00		283.01	6,020.82	-107.14	1,312.95	1,317.23	0.19	0.00	41.47
6,321.00	0.67	198.82	6,111.82	-107.60	1,312.57	1,316.88	0.77	0.44	-92.52
6,411.00		180.90	6,201.81	-108.57	1,312.39	1,316.77	0.23	-0.08	-19.91
6,502.00		199.49	6,292.81	-109.47	1,312.23	1,316.68	0.21	-0.03	20.43
6,592.00		206.15	6,382.80	-110.62	1,311.72	1,316.25	0.53	0.52	7.40
6,683.00		348.56	6,473.80	-111.04	1,311.29	1,315.85	1.53	-0.68	156.49
5,555.55			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
6,773.00		1.85	6,563.79	-110.51	1,311.23	1,315.75	0.20	-0.18	14.77
6,864.00	0.51	347.34	6,654.79	-109.91	1,311.15	1,315.63	0.29	0.27	-15.95
6,954.00	1.33	358.25	6,744.78	-108.47	1,311.03	1,315.41	0.93	0.91	12.12
7,045.00	0.97	2.05	6,835.76	-106.65	1,311.03	1,315.28	0.40	-0.40	4.18
7,136.00	1.13	354.85	6,926.75	-104.99	1,310.97	1,315.11	0,23	0.18	-7.91
7,226.00	0.63	35.72	7,016.74	-103.70	1,311.18	1,315.23	0.86	-0.56	45.41
7,317.00		358.30	7,107.73	-102.73	1,311.46	1,315.43	0.48	0.09	-41.12
7,407.00		65.24	7,197.73	-102.13	1,311.53	1,315.47	0.74	-0.64	74.38
7,498.00		82.82	7,288.72	-102.02	1,312.19	1,316.11	0.65	0.64	19.32
7,588.00		99.46	7,378.72	-102.03	1,313.23	1,317.15	0,23	-0.09	18.49
,								2 42	00.00
7,679.00		39,05	7,469.71	-101.46	1,314.25	1,318.13	1.01	0.46	-66.38
7,769.00		44.10	7,559.70	-100.24	1,315.33	1,319.13	0.10	-0.01	5.61
7,860.00		48.28	7,650.69	-99,44	1,316.14	1,319.87	0.72	-0.71	4.59
7,950.00		133.63	7,740.69	-99.50	1,316.65	1,320.38	0.67	0.11	94.83
8,041.00	0.67	109.27	7,831.68	-99,94	1,317.43	1,321.20	0.33	0.20	-26.77
8,131.00	0.14	181.08	7,921.68	-100.23	1,317.93	1,321.71	0.71	-0.59	79.79
8,222.00		180.29	8,012.68	-100.83	1,317.92	1,321.75	0.53	0.53	-0.87
8,313.00		194.35	8,103.67	-102.01	1,317.74	1,321.65	0.37	0.31	15.45
8,403.00		213,35	8,193.66	-102.94	1,317.41	1,321.38	0.63	-0.59	21.11





Company:

Kerr McGee Oil and Gas Onshore LP

Project: Site:

Well:

Uintah County, UT UTM12 NBU 922-30D PAD

NBU 922-30C3S

Wellbore: Design: ОН ОН Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939,00ft (ENSIGN 139)

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,494.00	0.47	217.21	8,284.66	-103.48	1,317.02	1,321.03	0.11	0.11	4.24
8,584.00	0.27	261.58	8,374.66	-103.81	1,316.59	1,320.63	0.37	-0.22	49.30
8,675.00	0.57	194.91	8,465.66	-104.28	1,316.26	1,320.33	0.58	0.33	-73.26
8,765.00	0.37	123.65	8,555.65	-104.87	1,316.38	1,320.50	0.63	-0.22	-79.18
8,856.00	0.94	145.51	8,646.65	-105.65	1,317.05	1,321.22	0.67	0.63	24.02
8,946.00	1.19	151.25	8,736.63	-107.08	1,317.92	1,322.18	0.30	0.28	6.38
9,037.00	1.54	137.51	8,827.61	-108.81	1,319.20	1,323.58	0.52	0.38	-15.10
9,127.00	1.38	123.93	8,917.58	-110.31	1,320.92	1,325.40	0.42	-0.18	-15.09
9,218.00	1.39	119.02	9,008.55	-111.45	1,322.79	1,327.35	0.13	0.01	-5,40
9,308.00	1.67	146.61	9,098.52	-113.08	1,324.47	1,329.14	0.87	0.31	30,66
9,399.00	1.92	133.36	9,189.48	-115.23	1,326.30	1,331.12	0.53	0.27	-14.56
9,482.00	1.92	123,90	9,272.43	-116.96	1,328.47	1,333.40	0.38	0.00	-11.40
LAST SDI M	WD PRODUCTIO	N SURVEY							
9,540.00	1.92	123.90	9,330.40	-118.04	1,330.08	1,335.09	0.00	0.00	0.00

Design Annotations				en er en stellte stellte kommen en
Measured	Vertical	Local Coor	dinates	
Depth (ft)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
188.00	188.00	0.20	1.07	FIRST SDI MWD SURFACE SURVEY
2,715.00	2,608.81	-46.71	663.84	LAST SDI MWD SURFACE SURVEY
2,792.00	2,681.42	-46.29	689.46	FIRST SDI MWD PRODUCTION SURVEY
9,482.00	9,272.43	-116,96	1,328.47	LAST SDI MWD PRODUCTION SURVEY
9,540.00	9,330.40	-118.04	1,330.08	SDI PROJECTION TO BIT

	A		Date
Checked By:	Approved By	<b>[</b> ,	Date:



# **Kerr McGee Oil and Gas Onshore LP**

Uintah County, UT UTM12 NBU 922-30D PAD NBU 922-30C3S

ОН

Design: OH

## **Survey Report - Geographic**

05 April, 2012





#### SDI Survey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

**Project**:

Uintah County, UT UTM12

Site: Well: NBU 922-30D PAD NBU 922-30C3S

Wellbore: Design:

OH ОН Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference: Survey Calculation Method:

Database:

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

EDM 5000.1 Single User Db

Project

Uintah County, UT UTM12

Map System: Geo Datum:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 - Western US

Map Zone:

Zone 12N (114 W to 108 W)

System Datum:

Mean Sea Level

Site

NBU 922-30D PAD, SECTION 30 T9S R22E

Site Position:

Lat/Long

+N/-S

+E/-W

ОН

Northing: Easting:

14,533,586.35 usft 2,063,914.56 usft

Latitude: Longitude:

0.97 °

Position Uncertainty:

0.00 ft

Slot Radius:

13,200 in

**Grid Convergence:** 

40.010842 -109.487614

Well

NBU 922-30C3S, 1253 FNL 662 FWL

Well Position

0.00 ft 0.00 ft

Northing: Easting:

14,533,586.35 usft 2,063,914.56 usft

11.08

Latitude: Longitude:

40.010842 -109.487614

**Position Uncertainty** 

0.00 ft

Wellhead Elevation:

ft

Ground Level:

4,925.00 ft

Wellbore

Magnetics

**Model Name** 

Sample Date

06/02/11

Declination (°)

Dip Angle (°)

65.88

Field Strength

(nT)

ОН

**Audit Notes:** 

Version:

Design

1.0

Phase:

ACTUAL

Tie On Depth:

0.00

52,341

**Vertical Section:** 

Depth From (TVD)

**IGRF2010** 

0.00

-12.08

+N/-S 0.00 +E/-W

0.00

Direction

-109.487411

(ft)

(ft)

(°)

40,010809

94.03

Survey Program From

(ft)

805.00

10.46

92.21

801.42

04/05/12 Date

To (ft)

Survey (Wellbore)

**Tool Name** 

Description

10.00 2,792.00 2,715.00 Survey #1 SDI MWD SURFACE (OH) 9,540.00 Survey #2 SDI MWD PRODUCTION (OH) MWD SDI MWD SDI MWD - Standard ver 1.0.1 MWD - Standard ver 1.0.1

Survey Vertical Map Map Measured Northing Easting Depth +E/-W +N/-S Depth inclination Azimuth (usft) (ft) (usft) Latitude Longitude (ft) (ft) (ft) (°) (°) 0.00 0.00 14.533,586,35 2,063,914.56 40.010842 -109.487614 0.00 0.00 0.00 0.00 40.010842 -109.487614 10.00 0.00 0.00 10.00 0.00 0.00 14,533,586.35 2,063,914.56 40.010843 -109.487610 1.07 14,533,586,57 2,063,915,63 79,38 188.00 0.20 188,00 0.70 FIRST SDI MWD SURFACE SURVEY 40.010843 -109.487604 0.19 2.83 14,533,586.59 2,063,917.39 94.85 273.98 1.67 274.00 40.010841 -109.487594 2,063,920.36 2.64 107.07 354.92 -0.465.79 14,533,586.00 355.00 444.75 -2.66 10,76 14,533,583.88 2,063,925.36 40,010835 -109.487576 118,14 445.00 4.31 40 010826 -109.487550 535.00 5.72 108,65 534.41 -5.69 17.99 14,533,580,97 2,063,932.64 40.010819 -109,487514 14,533,578,33 2,063,942.77 -8.50 28.07 623.79 625.00 7.65 103.29 40.010812 -109.487467 9.50 97.31 712.78 -10.82 41.27 14,533,576.23 2,063,956.01 715.00

14,533,575.24

2,063,971.56

56,80



## **SDI**Survey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 922-30D PAD NBU 922-30C3S

ОН

ОН

Wellbore: Design; Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

Measured			Vertical			Map	Map	Map			
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude		
arcard backs	Customer States and	Fraction was easy	UNANTO SOTTE SE	4988 FERRINGE	APRINT NAMED OF						
895,00 985,00	12.31 13.10	90,28 96,52	889.65 977.45	-12.45 -13.65	74,56 94.29	14,533,575.18	2,063,989.32	40.010808	-109.48		
						14,533,574.31	2,064,009.06	40.010805	-109.48		
1,075.00 1,165.00	14.07 15.21	96.96 93.97	1,064.93 1,152.01	-16.13 -18.28	115.28 137.92	14,533,572.18	2,064,030.10	40.010798	-109.48		
1,165.00	16.53	95.38	1,132.01	-10.20	162.44	14,533,570.42 14,533,568,82	2,064,052.77 2,064,077.32	40.010792	-109.48		
1,345.00	16.97	94.06	1,236.37	-20.30	188,29			40.010786	-109.48		
1,435.00	17.41	93.62	1,410.73	-24.21	214.83	14,533,567.13	2,064,103.21	40.010781 40.010776	-109.48		
1,525.00	18.91	93.62		-24.21 -25.71	242.84	14,533,565.80	2,064,129.77		-109.48		
1,615.00	19.26	94.67	1,496.25 1,581.30	-25.71 -27.57	272.20	14,533,564.77	2,064,157.80	40.010772	-109.48		
1,705.00	21,19	91.86	•	-27.37 -29.31	303.26	14,533,563.41	2,064,187.19	40.010766	-109.48		
			1,665.75			14,533,562.20	2,064,218.27	40.010762	-109.48		
1,795.00	22.07	92.21	1,749.41	-30.49	336.41	14,533,561.58	2,064,251.44	40.010758	-109.48		
1,885.00	22.42	90.02	1,832.72	-31.15	370.47	14,533,561.50	2,064,285.51	40.010757	-109.486		
1,975.00	22.16	90.46	1,915.99	-31.29	404.61	14,533,561.94	2,064,319.64	40.010756	-109.48		
2,065.00	21.98	93.44	1,999.40	-32.44	438.39	14,533,561.36	2,064,353.44	40.010753	-109.48		
2,155.00	21.02	94.41	2,083.14	-34.69	471.30	14,533,559.67	2,064,386.38	40.010747	-109.48		
2,245.00	19.96	95.82	2,167.44	-37.49	502.68	14,533,557.41	2,064,417.80	40.010739	-109.48		
2,335.00	20.49	95.64	2,251.89	-40.59	533.63	14,533,554.83	2,064,448.81	40.010731	-109.48		
2,425.00	19.61	94.06	2,336.44	-43.21	564.38	14,533,552.73	2,064,479.59	40.010723	-109.48		
2,515.00	20.40	93.00	2,421.01	<b>-45.10</b>	595.11	14,533,551.36	2,064,510.34	40.010718	-109.48		
2,605.00	20.31	91.95	2,505.39	-46.45	626.38	14,533,550.54	2,064,541.64	40.010715	-109.48		
2,715.00	19.52	88.79	2,608,81	<del>-4</del> 6.71	663.84	14,533,550.92	2,064,579.09	40.010714	-109.48		
	I MWD SURF										
2,792.00	19.36	89.32	2,681.42	-46.29	689.46	14,533,551.77	2,064,604.70	40.010715	-109.48		
FIRST SI	OI MWD PROD	UCTION SUF	RVEY								
2,882.00	20.01	91.99	2,766.16	-46.65	719.76	14,533,551.93	2,064,635.01	40.010714	-109.48		
2,973.00	20.90	97.73	2,851.43	-49.37	751.41	14,533,549.74	2,064,666.70	40.010707	-109.48		
3,063.00	22.87	96.01	2,934.94	-53.36	784.72	14,533,546.32	2,064,700.07	40.010696	-109.484		
3,154.00	21.96	93.77	3,019.07	-56.33	819.28	14,533,543.94	2,064,734.68	40.010687	-109.484		
3,244.00	23.79	96.63	3,101.99	-59.54	854.11	14,533,541.32	2,064,769.56	40.010679	-109.48		
3,335.00	23.45	94.73	3,185.37	-63.15	890.39	14,533,538.33	2,064,805.89	40.010669	-109.484		
3,425.00	22.78	93.60	3,268.14	-65.72	925.62	14,533,536.36	2,064,841.16	40.010662	-109.48		
3,516.00	21.86	93.74	3,352.32	-67.93	960.11	14,533,534.73	2,064,875.68	40.010656	-109.48		
3,606.00	20.22	92.78	3,436.32	-69.78	992.37	14,533,533.43	2,064,907.97	40.010650	-109.484		
3,697.00	18.78	93.84	3,522.10	-71.52	1,022.69	14,533,532.20	2,064,938.32	40.010646	-109.483		
3,787.00	19.91	96,86	3,607.02	-74.32	1,052.36	14,533,529.90	2,064,968.03	40.010638	-109.48		
3,877.00	19.92	96.09	3,691.64	-77.78	1,082.82	14,533,526.97	2,064,998.55	40.010628	-109.483		
3,968.00	16.84	92.71	3,777.99	-80.05	1,111.41	14,533,525.18	2,065,027.17	40.010622	-109.483		
4,058.00	15.86	93.97	3,864.35	-81.52	1,136.70	14,533,524.14	2,065,052.48	40.010618	-109.483		
4,149.00	13,62	90.99	3,952.35	-82.56	1,159.82	14,533,523.49	2,065,075.62	40.010615	-109.483		
4,239,00	13.33	96.29	4,039.87	-83.88	1,180.73	14,533,522.53	2,065,096.54	40.010612	-109.483		
4,330.00	11.52	97.03	4,128.74	-86.14	1,200.18	14,533,520.59	2,065,116.03	40.010606	-109.483		
4,420.00	10.49	96.15	4,217.08	-88.12	1,217.25	14,533,518.91	2,065,133.12	40.010600	-109.483		
4,511.00	9.65	95.13	4,306.68	-89.69	1,233.08	14,533,517.61	2,065,148.98	40.010596	-109.483		
4,601.00	9.15	94.06	4,395.47	-90.87	1,247.73	14,533,516.67	2,065,163.65	40.010593	-109.483		
4,692.00	8.36	95.24	4,485.41	-91.99	1,261.54	14,533,515.79	2,065,177.47	40.010589	-109.483		
4,782.00	7.61	101.85	4,574.54	-93,81	1,273.88	14,533,514.18	2,065,189.85	40.010584	-109.483		
4,873.00	6.32	99.23	4,664.86	-95.85	1,284.72	14,533,512.32	2,065,200.72	40.010579	-109.483		
4,963.00	5.24	101.41	4,754.41	-97.46	1,293.64	14,533,510.87	2,065,209.67	40.010574	-109.482		
5,054.00	3.23	99.66	4,845.15	-98.71	1,300.24	14,533,509.73	2,065,216.29	40.010574	-109.482		
5,144.00	3.03	101.28	4,935.02	-99.60	1,305.08	14,533,508.92	2,065,221.14	40.010569	-109.482		
5,235.00	1.36	114.18	5,025.95	-100.51	1,308.42	14,533,508.92	2,065,224.50	40.010566			
5,325.00	0.97	120.13	5,025.95	-100.31	1,300.42	14,533,505.06	2,065,226.14	40.010564	-109.482 -109.483		
5,416.00	1.27	121.43	5,206.91	-101.33	1,310.03	14,533,507.27			-109.482		
5,506.00	1.27	139.62	5,206.81	-102.25	1,311.56		2,065,227.68	40.010561	-109.482		
5,500.00	1.26	150.23	5,290.89	-105.39	1,313.13	14,533,505.07 14,533,503.40	2,065,229.26 2,065,230.49	40.010558 40.010553	-109.482 -109.482		



#### **SDI** Survey Report - Geographic



Company:

Kerr McGee Oil and Gas Onshore LP

Project:

Uintah County, UT UTM12

Site: Well: NBU 922-30D PAD NBU 922-30C3S

Wellbore: Design: ОН

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method: Database:

Well NBU 922-30C3S

GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139) GL 4925' & KB 14 @ 4939.00ft (ENSIGN 139)

True

Minimum Curvature

Measured			Vertical Depth		+E/-W	Map Northing	Map Easting		
Depth (ft)	Inclination (°)	Azimuth (°)	(y) Debru	+N/-S (ft)	+E/-VV (ft)	(usft)	(usft)	Latitude	Longitude
5,687.00	1.38	153,25	5,477,84	-107.11	1,315.31	14,533,501.59	2,065,231.50	40.010548	-109.482
5,778.00	0.21	347.04	5,568.83	-107.93	1,315.77	14,533,500.78	2,065,231.97	40.010546	-109.482
5,868.00	0.26	307.16	5,658.83	-107.64	1,315.57	14,533,501.06	2,065,231.76	40.010546	-109.482
5,959.00	0.63	284.89	5,749.83	-107.39	1,314.92	14,533,501.30	2,065,231.11	40.010547	-109.482
6,049.00	0.59	285.48	5,839.82	-107.14	1,313.99	14,533,501.54	2,065,230.18	40.010548	-109,482
6,140.00	0.27	245.69	5,930.82	-107.10	1,313.35	14,533,501.56	2,065,229.53	40.010548	-109.482
6,230.00	0.27	283.01	6,020.82	-107.14	1,312.95	14,533,501.51	2,065,229.13	40.010548	-109.482
6,321.00	0.67	198.82	6,111.82	-107.60	1,312.57	14,533,501.05	2,065,228.76	40.010547	-109.482
6,411.00	0.60	180.90	6,201.81	-108.57	1,312.39	14,533,500.08	2,065,228.60	40.010544	-109.482
6,502.00	0.57	199,49	6,292.81	-109.47	1,312,23	14,533,499.18	2,065,228,46	40.010541	-109.482
6,592.00	1.04	206.15	6,382.80	-110.62	1,311.72	14,533,498.01	2,065,227.97	40,010538	-109.482
6,683.00	0.42	348.56	6,473.80	-111.04	1,311.29	14,533,497.59	2,065,227.54	40,010537	-109.482
6,773.00	0.42	1.85	6,563.79	-110.51	1,311.23	14,533,498.12	2,065,227.48	40,010539	-109,482
•	0.20	347.34	6,654.79	-109.91	1,311.15	14,533,498.72	2,065,227.38	40.010540	-109.482
6,864.00	1.33	358.25	6,744.78	-108.47	1,311.03	14,533,500.15	2,065,227.24	40,010544	-109,482
6,954.00	0.97	2,05	6,835.76	-106.47	1,311.03	14,533,501.97	2,065,227.20	40.010549	-109,482
7,045.00		354.85	6,926.75	-104.99	1,311.03	14,533,503.64	2,065,227.12	40,010554	-109.482
7,136.00	1.13	35.72	7,016.74	-104.99	1,310.37	14,533,504.92	2,065,227.31	40.010557	-109.482
7,226.00	0.63		7,010.74	-103.70	1,311.46	14,533,505.90	2,065,227.57	40.010560	-109.482
7,317.00	0.71	358.30 65.24	7,107.73	-102.73	1,311.40	14,533,506.50	2,065,227.63	40.010562	-109.482
7,407.00	0.13			-102.13		14,533,506.63	2,065,228.29	40.010562	-109,482
7,498.00	0.71	82.82	7,288.72	-102.02	1,312.19 1,313.23	14,533,506.63	2,065,229.33	40.010562	-109,482
7,588.00	0.63	99.46	7,378.72		1,313.25	14,533,507.21	2,065,230.34	40.010563	-109.482
7,679.00	1.05	39.05	7,469.71	-101.46	1,314.25		2,065,231.40	40.010567	-109.482
7,769.00	1.04	44.10	7,559.70	-100.24		14,533,508.46	2,065,232.20	40.010569	-109,482
7,860.00	0.39	48.28	7,650.69	-99.44	1,316.14	14,533,509.27		40.010569	-109,482
7,950.00	0.49	133.63	7,740.69	-99.50	1,316.65	14,533,509.22	2,065,232.70	40.010568	-109,482
8,041.00	0.67	109.27	7,831.68	-99.94	1,317.43	14,533,508.79	2,065,233.50	40.010567	-109,482
8,131.00	0.14	181.08	7,921.68	-100.23	1,317.93	14,533,508.51	2,065,233.99	40.010565	-109.482
8,222.00	0.62	180.29	8,012.68	-100.83	1,317.92	14,533,507.91	2,065,234.00	40.010562	-109.482
8,313.00	0.90	194.35	8,103.67	-102.01	1,317.74	14,533,506.72	2,065,233.84		-109.482
8,403.00	0.37	213.35	8,193.66	-102.94	1,317.41	14,533,505.79	2,065,233.52	40.010559	-109.482
8,494.00	0.47	217.21	8,284.66	-103.48	1,317.02	14,533,505.24	2,065,233.14	40.010558	-109.482
8,584.00	0.27	261.58	8,374.66	-103.81	1,316.59	14,533,504.91	2,065,232.72	40.010557	
8,675.00	0.57	194.91	8,465.66	-104.28	1,316.26	14,533,504.43	2,065,232.40	40.010556	-109,482
8,765.00	0.37	123.65	8,555.65	-104.87	1,316.38	14,533,503.84	2,065,232.53	40.010554	-109.482
8,856.00	0.94	145.51	8,646.65	-105.65	1,317.05	14,533,503.07	2,065,233.21	40.010552	-109.482
8,946.00	1.19	151.25	8,736.63	-107.08	1,317.92	14,533,501.66	2,065,234.10	40.010548	-109.482
9,037.00	1.54	137.51	8,827.61	-108.81	1,319.20	14,533,499.95	2,065,235,41	40.010543	-109.482
9,127.00	1.38	123.93	8,917.58	-110.31	1,320.92	14,533,498.49	2,065,237.16	40.010539	-109.482
9,218.00	1.39	119.02	9,008.55	-111.45	1,322.79	14,533,497.37	2,065,239.05	40.010536	-109.482
9,308.00	1.67	146.61	9,098.52	-113.08	1,324.47	14,533,495.78	2,065,240.75	40.010532	-109.482
9,399.00	1.92	133.36	9,189.48	-115.23	1,326.30	14,533,493.65	2,065,242.63	40.010526	-109,482
9,482.00	1.92	123.90	9,272.43	-116.96	1,328.47	14,533,491.96	2,065,244.82	40.010521	-109.482
LAST SE	NWD PROD	UCTION SUF	RVEY						
9,540.00	1.92	123.90	9,330.40	-118.04	1,330.08	14,533,490.90	2,065,246,45	40.010518	-109.482

Sundry Number: 60873 API Well Number: 43047506440000

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0463
SUNDR	RY NOTICES AND REPORTS	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizo n for such proposals.		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 922-30C3S
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047506440000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	9. FIELD and POOL or WILDCAT: 929-6 INATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1253 FNL 0663 FWL	COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NWNW Section:	STATE: UTAH		
11. CHECI	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, F	EPORT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTIO	N
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
SUBSEQUENT REPORT Date of Work Completion: 2/10/2015	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMAT	ONS CONVERT WELL TYPE
	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
Report Date.		/	
	WILDCAT WELL DETERMINATION	OTHER	OTHER: WELLBORE CLEANOUT
A WORKOVER/WEI	COMPLETED OPERATIONS. Clearly show LLBORE CLEANOUT HAS BEE E THE ATTACHED OPERATIONS.	N COMPLETED ON TH	Accepted by the
NAME (PLEASE PRINT)	PHONE NUMB	ER TITLE	
Doreen Green	435 781-9758	Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 2/12/2015	

RECEIVED: Feb. 12, 2015

				U	S ROC	KIES RI	EGION		
				Opera	ition S	Summa	ry Report		
Well: NBU 922-3	OC3S PURPLE						Spud date: 1/22	2/2012	
Project: UTAH-U	INTAH		Site: NBl	Site: NBU 922-30D PAD			Rig name no.: MILES 3/3		
Event: WELL WO	ORK EXPENSE		Start date: 1/14/2015					End date: 1/22/2015	
Active datum: RI Level)	KB @4,939.00usft (a	bove Mean Se	a	UWI: N\	W/NW/0/9	9/S/22/E/3	0/0/0/26/PM/N/12	253/W/0/663/0/0	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation	
1/14/2015	7:00 - 7:30	0.50	MAINT	48	0000	Р	(aoit)	RIG DWN	
	7:30 - 9:30	2.00	MAINT	30	Н	Р		RDMO LOC	
	9:30 - 12:00	2.50	MAINT	30	Α	Р		RD RIG TO LOC, MIRU	
	12:00 - 13:00	1.00	MAINT	30	E	Р		BLOW DWN WELL, KILL WELL, NDWH, NU BOP'S, TEST BOP'S,	
	13:00 - 17:00	4.00	MAINT	31	В	Р		, UNLAND TBG, TBG STUCK, WORK TBG, PULL HANGER, WORK TBG, PU PWR SWIVEL, WORK TBG	
1/15/2015	7:00 - 7:30	0.50	MAINT	48		Р		WIRE LINE	
	7:30 - 9:30	2.00	MAINT	31	В	Р		TRY TO WORK TBG TO FREE, STILL STUCK	
	9:30 - 17:00	7.50	MAINT	34	1	Р		RU CUTTERS, PULL PLE, POOH LOST TOOLS, PULLED OUT OF ROPE SOCKET, NEED X/O CONECTION TO RETRIEVE TOOLS IN AM, RUN STUCK TBG LOG LOGGED 7100' TO 8920' TBG FREE.CAN'T LOG HIGHER, NO WTR, SWIF	
1/16/2015	7:00 - 7:30	0.50	MAINT	48		Р		LOGGING	
	7:30 - 8:30	1.00	MAINT	34	I	Р		PU FISHING TOOL, TIH LATCH ON LOST TOOLS, POOH LD TOOLS	
	8:30 - 9:30	1.00	MAINT	34	I	Р		PU TBG PLUG, TIH 8900', SET PLUG, POOH,	
	9:30 - 12:30	3.00	MAINT	34	1	Р		FILL TBG WITH WTR, PU LOG TOOL, TIH LOG TBG 8920' TO SURFACE	
	12:30 - 14:00	1.50	MAINT	34	H	P		PU PERF GUN TIH TO 6631', PERF TBG, TRY TO CIRC,	
	14:00 - 16:00	2.00	MAINT	31	F	P		PU PWR SWIVEL,CIRC TBG, WORK TBG	
4/40/0045	16:00 - 18:00 7:00 - 7:30	2.00	MAINT	34	Н	Р		TIH CHEM CUT TBG,6605', TBG FREE, SWIFE	
1/19/2015	7:00 - 7:30 7:30 - 11:00	0.50 3.50	MAINT MAINT	48 45	Α	P P		SCANNING TBG	
	7.30 - 11.00	3.50	IVIAINI	45	A	Р		RU SCAN TECH, SCAN 208 JTS TBG OOH, 131 YB, 26 BB, 51 RED	
	11:00 - 16:00	5.00	MAINT	31	В	Р		PU T-DOG, 2 JTS WASH PIPE, INTENSIFIER, JARS, X/O'S, TIH T0 6250', 190 JTS. SWIFN	
								TOOL ASSY 3 7/8" SHOE T-DOG OVERSHOT 2 JTS 3 3/4" WASH PIPE 3 3/4" DRIVE HYD SUB 3 1/8" JARS 2 3/8" REG X 2 7/8" PAC X/O 4 3 1/8" DC 2 7/8" PAC X 2 3/8" REG X/O INTENSIFIER X/O 2 3/8" REG X 2 3/8" EUE TOTAL 214.96'	
1/20/2015	7:00 - 7:30	0.50	MAINT	48		Р		FISHING	
	7:30 - 9:00	1.50	MAINT	31	В	Р		TIH 12 JTS, RU PWR SWIVEL, FOAM UNIT, BREAK CIRC,	
	9:00 - 11:00	2.00	MAINT	44	D	Р		STING OVER TBG TOP, WASH DWN TO BRIDGE, MILL BRIDGE, BROKE FREE,	
	11:00 - 15:00	4.00	MAINT	31	ı	Р		LATCHED ON FISH, POOH TO FISH, LOST FISH ASSY ( 8000#) AROUND 500',	

2/12/2015 1:31:02PM 1

<u> Sundry Number: 60873 API Well Number: 43047506440000</u> US ROCKIES REGION **Operation Summary Report** Well: NBU 922-30C3S PURPLE Spud date: 1/22/2012 Project: UTAH-UINTAH Site: NBU 922-30D PAD Rig name no.: MILES 3/3 Event: WELL WORK EXPENSE End date: 1/22/2015 Start date: 1/14/2015 UWI: NW/NW/0/9/S/22/E/30/0/0/26/PM/N/1253/W/0/663/0/0 Active datum: RKB @4,939.00usft (above Mean Sea P/U Date Time Duration Phase Code Sub MD from Operation Start-End (hr) Code (usft) 15:00 - 17:00 2.00 **MAINT** 31 Ρ LD T-DOG ASSY, PU OVERSHOT, SET ABOVE SHOE AND 2 JTS WASH PIPE., TIH TO FISH TBG. EOT 106 JTS 3518' - 7:30 1/21/2015 7:00 0.50 **MAINT** 48 Р **FISHING** 7:30 - 12:00 Ρ 4.50 **MAINT** 44 D TIH TO 6674' 206 JTS. TAG SCALE. PU PWR SWIVEL, BREAK CIRC WITH FOAM UNIT, MILL DWN ON SCALE, TAG AT 221 JTS, 7143' 12:00 - 15:00 3.00 MAINT Τ Ρ PULL 30,000# OVER STRING WT. POOH, STD BACK 110 STDS TO FISH ASSY 15:00 - 16:00 1.00 **MAINT** 31 Р ,LD BHA, RD PWR SWIVEL, LD 73 JTS FISH ON TLR 16:00 - 17:30 1.50 **MAINT** LD 73 JTS FISH ON TLR, SWIFN 7:00 - 7:15 Р 1/22/2015 0.25 WO/REP 48 SAFETY = JSA. 7:15 - 11:30 WO/REP Р 4.25 31 SICP= 600#. BLOW DOWN CSG TO FLOWBACK TANK. CNTRL CSG W/ 30BBLS TMAC. P/U & RIH W/ 1.875" XN + 281JTS 2-3/8" L-80 TBNG. LAND TBG ON HANGER. R/D FLOOR & TBG EQUIP. NDBOP. NUWH. PRODUCTION TBNG LANDED AS FOLLOWS:\n\nKB= 14.00'\nHANGER= .83'\n153JTS 2-3/8" L-80 Y-BND TBNG= 4856.52'\n128JTS 2-3/8" L-80 NEW TBNG= 4057.47'\n1.875" XN= 2.20'\nEOT @ 8931.02'\n\nTBNG NOT BROACHED DUE TO BAD SAND LINE. 11:30 - 15:00 WO/REP 3.50 MIRU FOAM-AIR UNIT. BREAK CONV CIRC IN 45MIN. CIRC TO FLOWBACK TANK. LET WELL CONTINUE TO UN-LOAD FLUID FOR 1HR. RDMO FOAM-AIR UNIT. SWI. RDMOL. ROAD RIG TO UTE TRIBAL 35-19. SPOT IN RIG. WAIT ON BLOCKS. SDFN.\n\nNOTE: WELL NEEDS TO BE PURGED PRIOR TO BRINGING BACK ON LINE!!\n\n 7:00 1/26/2015 - 14:30 7.50 **PROD** 42 В Р FLUID LEVEL=6000 7:00 - 15:00 8.00 PROD В Р 1/27/2015 42 **SWARRING** 7:00 - 15:00 8.00 PROD 1/28/2015 42 В FLUID LEVEL=5300 7:00 - 17:00 10.00 PROD 1/29/2015 42 R Р FLUID LEVEL=6200' 1/30/2015 7:00 - 15:00 8.00 PROD 42 В Р FLUID LEVEL=6500 2/10/2015 7:00 - 12:00 5.00 **MAINT** 35 Ρ `Travel to location, rig up on well. Ran jdc down to 8943, latched on to plunger, come out with a Scale Breacker. Ran sample baylor for TD at 9453, come out, no sample. Ran broach down to 8943, tight spots at 4000-5000, come out, scale on broach. Blew well to tanks for 15 min. Drop and chase New Titanium Spring and New Viper Plunger down to

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8943, come out, tubing clean. Rig down travel to

shop.